



**Digital cameras** 

**Camere digitale** 



40

SLR cameras

Fotocamere reflex

monobiettivo



64

Compact finder cameras

Fotocamere compatte





Lenses and accessories

Obiettivi ed accessori



167

Speedlights and accessories

Lampeggiatori ed accessori



188

Camera accessories / Various

Accessori di fotocamere / Vari



237

Nikonos underwater cameras

Fotocamere Nikonos subacqueo



**25**5

Binoculars

Binocoli

**28**4

Nikon distributors in Europe Distributori Nikon in Europa



# A Chapter of a Success Story

In 1948 a company called Nikon, at that time guite unknown, introduced its first viewfinder camera in this country. Only eleven years on, it launched the efficient Nikon F onto the market - this new SLR camera set the trend and sounded the bells for a new era of professional 35mm photography. Virtually from one day to the other, Nikon became the name for innovation, versatility, longevity and ease of operation. In technical terms, the first Nikon cameras and the current versions couldn't be more different. However one thing has not changed over the decades: Nikon's extraordinary philosophy with regard to quality, which has marked every chapter in this long success story. This has guaranteed practical functionality, professionally versatile systems and optimum value up to this day.

# Un capitolo di una splendida storia

Nel 1948, una ditta guasi sconosciuta di nome Nikon presentava un primo apparecchio fotografico. Solamente undici anni più tardi, lanciava sul mercato la straordinaria Nikon F, e guesta fotocamera reflex capace di offrire prestazioni che ancora oggi non sono state equagliate, apriva una nuova era della fotografia professionale per guanto riguarda il formato 35 mm. Praticamente da un giorno all'altro, Nikon è diventato sinonimo d'innovazione, di diversificazione, di longevità e comodità d'uso. La differenza fra i primi apparecchi Nikon ed i modelli attuali è enorme. Tecnicamente tutto è stato rovesciato. Ma una cosa non è cambiata durante questi decenni, ed è l'eccezionale filosofia della qualità di Nikon. Proprio guesta filosofia gioca un ruolo determinante in ogni capitolo della storia di un successo permanente, che continua ancora oggi: essa è garante di funzionalità pragmatica, di diversificazione professionale del sistema e di mantenimento ottimale della qualità.



Nikon I (1948)



Nikon M (1950)



Nikon S (1951)



Nikon S2 (1954)



Nikon SP (1957)



Nikon S3 (1958)



Nikon S4 (1959)



Nikon F (1959)



Nikon F Photomic (1962)



Nikkormat FT (1965)



Nikonos (1963)



Nikkormat FS (1965)



Nikon S3M (1960)



Nikon F Photomic T (1965)



Nikon F Photomic T<sub>N</sub> (1967)







Nikon F Photomic FTN (1968)



Nikonos II (1968)



Nikon F2 (1971)



Nikon F2 Photomic (1971)



Nikkormat EL (1972)



Nikon F2 Photomic S (1973)



Nikkormat FT2 (1975)



Nikonos III (1975)



Nikkormat ELw (1976)



Nikon F2 Photomic SB (1976)



Nikon F2 Photomic A (1977)



Nikkormat FT3 (1977)



Nikon FM (1977)



Nikon EL2 (1977)



Nikon F2 Photomic AS (1977)



Nikon FE (1978)



Nikon EM (1979)



Nikon F3 (1980)



Nikonos IV-A (1980)



Nikonos F3 HP (1982)



Nikon FM2 (1982)



Nikon FG (1982)



Nikon F3/T (1982)





Nikon FG-20 (1984)



Nikon FE2 (1983)



Nikonos V (1984)



Nikon FA (1983)



Nikon F-301 (1985)



Nikon F-501 (1986)



Nikon F-401 (1987)



Nikon F-801 (1988)



Nikon F4 (1988)



Nikon F-401s (1989)



Nikon QV-1000C (1989)



Nikon F-601 (1990)



Nikon F-601м (1990)





Nikon F-401x (1991)



Nikon FM2/T (1993)



Nikonos RS (1992)











Nikon F90X (1994)



Nikon E2/E2s (1995)



Nikon F3H (1996)



Nikon F70 (1994)



Nikon F5 (1996)



Nikon Coolpix 100 (1997)



Nikon 28Ti (1994)



Nikon Pronea 600i (1996)



Nikon Coolpix 300 (1997)





Nikon E3/E3s (1998)



Nikon F60 (1998)



Nikon Pronea S (1998)



Nikon Coolpix 900/900s (1998)



Nikon Coolpix 600 (1998)



Nikon F100 (1998)



Nikon D1 (1999)



Nikon Coolpix 950 (1999)



Nikon Coolpix 700 (1999)



Nikon Coolpix 800 (1999)



Nikon S3 (2000)





Nikon Coolpix 990 (2000)



Nikon F65 (2000)



Nikon Coolpix 880 (2000)



Nikon Coolpix 995 (2000)



Nikon D1x (2001)



Nikon FM3A (2001)



Nikon D1H (2001)



Nikon Coolpix 775 (2001)



Nikon Coolpix 885 (2001)



Nikon Coolpix 5000 (2001)

	Nikon D1H	Neg Wide Converter WC-EH 64	Digital accessories Accessori Camere digitale
Nikon	Nikon D1X		Scanner Coolscan LS IV ED
	Coolpix 5000		Scanner Coolscan LS 4000 ED
	Coolpix 995	UDo) UDo) A A A A A A A A A A A A A	Scanner Coolscan LS 8000 ED
	Coolpix 885		
	Coolpix 775		

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# Nikon Digital Camera D1H

Order code	VAA109EG
Camera type	Single-lens reflex digital came-
CCD	ra with interchangeable lenses $23.7 \times 15.6$ mm RGB CCD;
	2.74 million pixels; 2.66 million
	effective pixels (2,012 $\times$ 1,324);
	captures 12-bit full-colour
	image
Image size	3,008 × 1,960 or 2,000 × 1,312
Sensitivity	ISO equivalency 200–1,600
Storage system	(variable in 1/3 or 1 EV steps) Digitally stored; JPEG baseline
Storage system	(approx. 1/8, 1/16 compressed),
	uncompressed (12-bit RAW,
	8-bit YcbCr-TIFF; 8-bit RGB-
	TIFF); monochrome mode
Storage media	CompactFlash™ cards (type I
O lite and	or II) and Microdrive™
Quality and number of frames	see table
Shooting modes	Single frame (S) mode: ad-
shooting modes	vances one frame with each
	shutter release; capture pre-
	view mode available
	Continuous shooting (C) mode:
	approx. 3 frames per sec. (up to 9 consecutive shots)
	Self-timer mode: timer duration
	can be set
	Playback (Play): playback
	mode, menu control
	PC: data transfer via personal
White Balance	computer Auto (TTL control with 1,005
White balance	pixels CCD)
	Manual (6 settings with fine
	tuning)
	Preset
LCD monitor	2 inch TFT display with 130,000
	dots, low temperature; backlighting and brightness
	adjustable
Playback menu	Protect attribute
	Hide attribute
	NTSC or PAL switchable
Playback function	Indication directory switching Full frame
Theyback function	Thumbnail (4/9 segments)
	Slide show
	Enlarged frame playback
	Histogram indication, highlight
	point display and focus confir-
	mation indication
Delete functions	mation indication Card formatting
Delete functions	mation indication Card formatting All frames delete
Delete functions	Card formatting
Video output	Card formatting All frames delete Selected frames delete NTSC or PAL switchable
	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS
Video output Interface	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection)
Video output	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS
Video output Interface	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor:
Video output Interface	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except
Video output Interface	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus
Video output Interface	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type):
Video output Interface	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D
Video output Interface	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type):
Video output Interface	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D colour matrix metering and 3D multi-sensor balanced fill-flash for D1-series
Video output Interface	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D colour matrix metering and 3D multi-sensor balanced fill-flash for D1-series AI-P Nikkor: all functions pos-
Video output Interface	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D colour matrix metering and 3D multi-sensor balanced fill-flash for D1-series AI-P Nikkor: all functions pos- sible except 3D colour matrix
Video output Interface	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D colour matrix metering and 3D multi-sensor balanced fill-flash for D1-series AI-P Nikkor: all functions pos- sible except 3D colour matrix metering, 3D multi-sensor
Video output Interface	Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D colour matrix metering and 3D multi-sensor balanced fill-flash for D1-series AI-P Nikkor: all functions pos- sible except 3D colour matrix





	Usable in [A] or [M] mode,
	centre-weighted or spot meter-
	ing. Electronic rangefinder us-
	able with lens with maximum aperture of f/5.6 or greater
Picture angle	Approx. $1.5 \times \text{ in } 35 \text{ mm} (135)$
· · · · · · · · · · · · · · · · · · ·	format equivalent
Viewfinder	Optical viewfinder; pentaprism
	with built-in dioptre adjust-
	ment (-3 to +1 m <sup>-1</sup> ); eyepiece
	cover provided
Eyepoint	22 mm (at –1.0 m <sup>-1</sup> )
Focusing screen	B-type BriteView clear matte screen III; interchangeable with
	optional E-type screen with
	grid for D1-series
Viewfinder	5
frame coverage	Approx. 96%
Viewfinder	
magnification	Approx. 0.8 $\times$ with 50 mm
	lens, set to infinity, and dioptre
Viewfinder	setting of1.0 m <sup>-1</sup> Focus indications, shutter
information	speed, aperture, exposure
internation	mode, metering system, shutter
	speed lock, aperture lock,
	AE lock, electronic analogue
	display, frame counter, flash
	ready-light, five sets of focus
Reflex mirror	brackets (area) Instant-return type reflex mirror
Depth-of-field	instant-return type renex mirror
preview button	Stops lens down to aperture
Autofocus	TTL phase detection with Nikon
	Multi-Cam 1300
	autofocus module; detection
	range: EV –1 to EV 19 (ISO 100
	equivalent at normal tempera- ture)
Lens servo control	Single servo AF (S)
	Continuous autofocus (C)
	Manual focus (M)
Focus tracking	Tracking automatically acti-
	vated by subject's move-
A	ment in (S) or (C) modes
Autofocus area metering	One of five focus areas can be selected
Autofocus area	Single area AF; dynamic AF
metering mode	mode (with setting for
J	closest subject priority )
AF lock	Focus is locked by lightly press-
	ing shutter release button
	(single autofocus) or by press-
Exposure metering	ing AF-L/AE-L button System: TTL full-aperture
system	metering system;
System	3D colour matrix metering with
	1,005-pixel CCD
	Centre-weighted metering with
	75% of the meter sensitivity
	concentrated on the middle
	circle segment (8 mm dia- meter)
	meter)
	meter) Spot metering (middle circle
	meter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame)
Exposure metering	meter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering:
Exposure metering range	meter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering: EV 0–20
	meter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering: EV 0–20 Centre-weighted metering:
	meter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering: EV 0–20 Centre-weighted metering: EV 0–20
	meter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering: EV 0–20 Centre-weighted metering: EV 0–20 Spot metering: EV 2–20
	meter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering: EV 0–20 Centre-weighted metering: EV 0–20

Lenses without CPU control:





Remote control	Via 10-pin remote terminal, IEEE1394 (400 Mbit/sec.)
<b>Power requirements</b>	Ni-MH battery pack EN-4
	(7.2 V DC), quick charger MH-17
	(12 V DC) / 16/15; AC adapter
	EH-4 (100–240 V AC)
Tripod socket	1/4 in. (JIS)
Custom settings	35 settings can be selected on
	LCD monitor
Dimensions	Approx. 157 × 153 × 85 mm
	$(W \times H \times D)$
Weight	Approx. 1.1 kg (without
-	battery)

Supplied with: Neck strap Video cable Standard software: "NikonView" browser

### **Optional accessories:**

Ni-MH battery pack EN-4 Quick charger MH-16 AC adapter EH-4 CompactFlash cards Speedlight SB28DX Speedlight SB50DX IEEE1394 cable SCD1 "Nikon Capture" control software

### System requirements for Windows®

Microsoft<sup>®</sup> Windows 98SE/2000/ME or later

Memory	Minimum of 16 MB RAM (more
Nikon ViewDX	than 32 MB recommended)

Memory Minimum of 64 MB RAM (more Nikon Capture than 128 MB recommended)

#### System requirements for Macintosh®

Mac®OS 8.6 or later (CPU: Power PCTM G3, G4)

Memory	Minimum of 16 MB RAM (more
Nikon ViewDX	than 32 MB recommended)

MemoryMinimum of 32 MB (moreNikon Capturethan 64 MB recommended)

# D1X Nikon Digital Camera

Order code	VAA109EM
Type of camera	Digital SLR camera with inter-
	changeable lenses
CCD	23.7 × 15.6 mm RGB CCD;
	5.47 million pixels; captures
	12-bit full colour image
Image size	3,008 × 1,960 or
-	2,012 × 1,324
Sensitivity	ISO equivalency 125–800
-	(variable in 1/3, 1/2 or 1 EV
	steps)
Storage system	System: digitally stored; JPEG
5,	baseline (approx. 1/8, 1/16
	compressed), uncompressed
	(12-bit RAW, 8-bit YcbCr-TIFF,
	8-bit RGB-TIFF), grey-scale
	mode
Storage media	CompactFlash™ card (type I or
Storage media	II) and Microdrive™
Capture modes	Single frame (S): advances
Capture modes	one frame with each shutter
	release; capture preview mode
	available
	Continuous shooting (C) mode:
	approx. 3 frames per sec. (up to
	9 consecutive shots)
	Self-timer mode; timer duration
	can be set
	Playback (Play): playback
	mode, menu control
	PC: data transfer via personal
	computer
White balance	Auto (TTL control with 1,005
	pixels CCD)
	Manual (6 settings with fine
	tuning)
	Preset
	2 inch ET dicploy with 120 000
LCD monitor	2 inch FT display with 130,000
LCD monitor	dots, low temperature; back-
LCD monitor	dots, low temperature; back- lighting and brightness adjust-
	dots, low temperature; back- lighting and brightness adjust- able
LCD monitor Playback function	dots, low temperature; back- lighting and brightness adjust- able Protect attribute
	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute
	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable
Playback function	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching
	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame
Playback function	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments)
Playback function	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show
Playback function	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments)
Playback function	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Side show Enlarged frame playback Histogram indication, highlight
Playback function	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con-
Playback function Playback menu	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication
Playback function	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting
Playback function Playback menu	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete
Playback function Playback menu Delete function	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete
Playback function Playback menu Delete function Video output	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable
Playback function Playback menu Delete function	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection)
Playback function Playback menu Delete function Video output	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor:
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type):
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D colour matrix metering and 3D
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D colour matrix metering and 3D multi-sensor balanced fill-flash
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D colour matrix metering and 3D multi-sensor balanced fill-flash for D1-series
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D colour matrix metering and 3D multi-sensor balanced fill-flash for D1-series AI-P Nikkor: all functions possi-
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D colour matrix metering and 3D multi-sensor balanced fill-flash for D1-series AI-P Nikkor: all functions possi- ble except 3D colour matrix
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except autofocus AF Nikkor (all functions possi- ble except 3D colour matrix metering, 3D multi-sensor
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute Hide attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type Manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except 3D colour matrix metering and 3D multi-sensor balanced fill-flash for D1-series AI-P Nikkor: all functions possi- ble except 3D colour matrix metering, 3D multi-sensor balanced fill-flash for D1 and
Playback function Playback menu Delete function Video output Interface	dots, low temperature; back- lighting and brightness adjust- able Protect attribute NTSC or PAL switchable Indication directory switching Full frame Thumbnail (4/9 segments) Slide show Enlarged frame playback Histogram indication, highlight point display and focus con- firmation indication Card formatting All frames delete Selected frames delete NTSC or PAL switchable IEEE1394 and RS-232C (GPS connection) D-type AF Nikkor: all functions possible D-type manual-focus Nikkor: all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except autofocus AF Nikkor (other than D-type): all functions possible except autofocus AF Nikkor (all functions possi- ble except 3D colour matrix metering, 3D multi-sensor





	Usable in [A] or [M] mode, cen-
	tre-weighted or spot metering.
	Electronic rangefinder usable
	with lens with maximum aper- ture of f/5.6 or greater
Picture angle	Approx. 1.5 $\times$ focal length in
eta e angre	35 mm format equivalent
Viewfinder	Optical viewfinder; pentaprism;
	built-in dioptre adjustment
	$(-3 \text{ to } +1 \text{ m}^{-1})$ ; eyepiece cover
Evanaint	provided
Eyepoint Focusing screen	22 mm (at –1,0 m <sup>–1</sup> ) B-type BriteView clear matte
rocusing screen	screen III;
	interchangeable with optional
	E-type screen
	with grid for D1-series
Viewfinder frame	Approx 060/
coverage Viewfinder	Approx. 96% Approx. 0.8 $\times$ with 50 mm
magnification	lens, set to infinity, and dioptre
<b>j</b>	setting of -1.0 m <sup>-1</sup>
Viewfinder	Focus indications, shutter
information	speed, aperture, exposure
	mode, metering system, shutter
	speed lock, aperture lock, AE lock, electronic analogue dis-
	play, frame counter, ready-light,
	five sets of focus brackets
	(area)
Reflex mirror	Instant-return type reflex mirror
Depth-of-field	Stop down lens aperture by
preview button	pressing depth-of-field preview button
Autofocus	TTL phase detection with Nikon
	Multi-Cam 1300 autofocus
	module; detection range: EV –1
	to EV 19 (ISO 100 equivalent at
	normal temperature)
Lens servo control	Single servo AF (S)
Lens servo control	Single servo AF (S) Continuous autofocus (C)
Lens servo control Focus tracking	Single servo AF (S)
	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement
Focus tracking	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes
Focus tracking Autofocus area	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be
Focus tracking Autofocus area metering	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected
Focus tracking Autofocus area metering Autofocus area	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be
Focus tracking Autofocus area metering	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF
Focus tracking Autofocus area metering Autofocus area	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press-
Focus tracking Autofocus area metering Autofocus area metering mode	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button
Focus tracking Autofocus area metering Autofocus area metering mode	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press-
Focus tracking Autofocus area metering Autofocus area metering mode AF lock	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button
Focus tracking Autofocus area metering Autofocus area metering mode	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press-
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TIL full-aperture metering system; 3D colour matrix metering with
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TTL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TTL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TTL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing AF-L/AE-L by lightly press- ing AF-L/AE-L button System: TTL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity concentrated on the middle
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TTL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing AF-L/AE-L button System: TTL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity concentrated on the middle circle segment (8 mm diame- ter) Spot metering (middle circle
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TIL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity concentrated on the middle circle segment (8 mm diame- ter) Spot metering (middle circle segment of 4 mm diameter,
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure metering system	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity concentrated on the middle circle segment (8 mm diame- ter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame)
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure metering system	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TTL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity concentrated on the middle circle segment (8 mm diame- ter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering:
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure metering system	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TTL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity concentrated on the middle circle segment (8 mm diame- ter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering: EV 0–20
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure metering system	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TTL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity concentrated on the middle circle segment (8 mm diame- ter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering:
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure metering system	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TTL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity concentrated on the middle circle segment (8 mm diame- ter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering: EV 0–20 Centre-weighted metering: EV 0–20 Spot metering: EV 2–20 (at
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure metering system	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity concentrated on the middle circle segment (8 mm diame- ter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering: EV 0–20 Centre-weighted metering: EV 0–20 Spot metering: EV 2–20 (at normal temperature, ISO 100
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure metering system	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TTL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity concentrated on the middle circle segment (8 mm diame- ter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering: EV 0–20 Centre-weighted metering: EV 0–20 Spot metering: EV 2–20 (at normal temperature, ISO 100 equivalent of lens aperture of
Focus tracking Autofocus area metering Autofocus area metering mode AF lock Exposure metering system	Single servo AF (S) Continuous autofocus (C) Manual focus (M) Tracking automatically acti- vated by subject's movement in (S) or (C) modes One of five focus areas can be selected Single area AF; dynamic AF mode (with setting for closest subject priority) Focus is locked by lightly press- ing shutter release button (single autofocus) or by press- ing AF-L/AE-L button System: TL full-aperture metering system; 3D colour matrix metering with 1,005-pixel CCD Centre-weighted metering with 75% of the meter sensitivity concentrated on the middle circle segment (8 mm diame- ter) Spot metering (middle circle segment of 4 mm diameter, approx. 2% of entire frame) 3D colour-matrix metering: EV 0–20 Centre-weighted metering: EV 0–20 Spot metering: EV 2–20 (at normal temperature, ISO 100

Lenses without CPU control:





Power requirements	Ni-MH battery pack EN-4 (7.2 V DC), quick charger MH-17 (12 V DC) / 16/15; AC adapter EH-4 (100–240 V AC)
Tripod socket	1/4″ (JIS)
Custom settings	35 settings can be selected on LCD monitor
Dimensions	Approx. 157 $\times$ 153 $\times$ 85 mm (W $\times$ H $\times$ D)
Weight	Approx. 1.1 kg (without batteries)

Supplied with: Neck strap Video cable

Standard software: "NikonView" browser

### Optional accessories: Ni-MH battery pack EN-4

Quick charger MH-16 AC adapter EH-4 CompactFlash cards Speedlight SB28DX Speedlight SB50DX IEEE1394 cable SCD1 "Nikon Capture" control software

### System requirements for Windows®

Microsoft<sup>®</sup> Windows 98SE/2000/ME or later

Memory, Nikon ViewDX	Minimum of 16 MB RAM (more than 32 MB recommended)
Memory, Nikon Capture	Minimum of 64 MB RAM (more than 128 MB recommended)

### System requirements for Macintosh®

Mac®OS 8.6 or later (CPU: Power PCTM G3, G4)

Memory,	Minimum of 16 MB RAM (more
Nikon ViewDX	than 32 MB recommended)

Memory,Minimum of 32 MB (more thanNikon Capture64 MB recommended)

# Nikon Coolpix 5000

Order code	VAA116EA
Camera type	Digital compact camera
CCD Sensor	2/3 inch CCD with 5.06 million
	pixels
Resolution	$2560 \times 1920$ pixels
Lens	3× zoom-Nikkor; 7.1 to
	21.4 mm lens (35 mm camera
	format equivalent to 28 to
	85 mm); f/2.8 to 4.8
Digital zoom	Button controlled, up to $4 \times$
5	digital zoom
Autofocus (AF)	Contrast-detect TTL; 5-segment
Autolocus (Al)	multi AF, continuous AF (moni-
	multi AF, Continuous AF (mom-
	tor on), single AF, AF spot meter-
	ing, manual focus
Focus range	50 cm to infinity; 2 cm to infini-
	ty in macro mode
LCD monitor	1.8-inch, 110,000-dot, TFT LCD
	monitor with 5-step brightness
	adjustment
Storago modia	CompactFlash <sup>™</sup> (CF) card type
Storage media	I and II
ch	
Shooting modes	Programmed auto (P); aperture-
	priority auto (A); shutter-priority
	auto (S); manual (M); custom
	settings, up to three configura-
	tions can be memorised
Menu options	White balance, exposure meter-
•	ing, continuous shooting, BSS
	(best-shot selector), lens, image
	adjustment (auto, standard,
	more contrast, less contrast,
	brighter, darker, black and
	white, image sharpening),
	digital zoom (up to 4× magni-
	fication), noise reduction, low-
	noise-mode, hue adjustment
Capture modes	Single, L series (max. 10 expo-
	sures at 1.5 fps); H series (max.
	4 exposures at 3 fps); high
	speed series (SXGA, XGA or
	VGA size at 5 fps); ultra-high
	speed series (up to 100 expo-
	speed series (up to 100 expo-
	sures in QVGA size at 30 fps);
	multi-shot 16 (16 frames at
	5 fps), movie sequence with
	sound (max. 40 sec. at 15 fps
	in QVGA size)
Shutter	Mechanical and electronic shut-
	ter; speeds: 8 to 1/4000 sec.,
	bulb up to 60 sec.
Aperture	7-blade iris diaphragm,
•	10 aperture steps selectable
Exposure modes	Programmed auto and manual
Exposure	$\pm$ 2 EV in 1/3 EV steps; auto
compensation	exposure bracketing
Exposure range	EV $-2$ to $+18$ (wide angle),
	EV -0.5 to +18 (telephoto),
	(ISO 100 equivalent)
Sensitivity	ISO 100 equivalent; ISO 200,
	400, 800 can be set manually





White balance	Matrix auto with TTL control; 5 manual modes with fine tuning (sun, light-bulb, fluorescent, daylight, cloudy, speedlight), white balance bracketing
Self timer	10 sec. or 3 sec. duration
Built-in speedlight	Guide number 10 at ISO 100
Flash modes	Auto, anytime flash (fill-flash),
	flash cancel (off), slow sync,
	red-eye reduction
Accessory shoe	ISO 518 (standard)
External speedlights	Sync terminal for Nikon speed-
	lights SB 50DX, 28DX, 28, 27, 22s
Delete mode	Deletes all or selected frames
Computer interface	USB interface
Video output	Selectable, NTSC or PAL
I/O terminal	Power input; video output;
	digital interface (USB)
Power source	Rechargeable EN-EL1 Li-ion
	battery
Battery life	Approx. 100 min, when using
	monitor (at 20°C/68°F
Dimensions	Approx. 101.5 × 81.5 × 67.5
	mm (W $\times$ H $\times$ D)
Weight	Approx. 360 g
-	(without batteries)





System requirements Windows® 98/985E, USB System: Windows® 98/985E, Windows® 2000, Windows® ME or later (pre-installed version) CPU: MMX® Pentium or later System requirement Macintosh® System: Mac® 058.6 or later (only built-in USB ports are sup-

ported)

Types iMac<sup>™</sup>, iBook<sup>™</sup>, Power Macintosh<sup>®</sup> G3 (blue and white), PowerMac<sup>™</sup> G4 or later; PowerBook<sup>®</sup> G3 (with USB built-in) or later

### Supplied with: Battery pack EN-EL1

Battery charger MH52 Lens cap, neck strap Video cable 32MB CompactFlash™ card USB cable

Supplied software: Nikon View Ver. 4 (CD-ROM) Photoshop® Elements (CD-ROM) Photostation Easy

### **Optional accessories:**

Rechargeable lithium-ion battery EN-EL1 AC adapter EH-21 Battery pack MB-E 5000 CompactFlash memory cards PC card adapter EC-AD1 Adapter for converter URE6/7

# Nikon Coolpix 995

Order code	VAA113EC
Camera type CCD sensor	Digital camera 1/1.8 inch CCD with
CCD Selisor	3.24 million pixels
Image size	2,048 × 1,536 pixels; UXGA (1,600 × 1,200);
	SXGA (1,280 $\times$ 960);
	XGA (1,024 × 768);
	VGA (640 × 480) and 3:2 (2,048 × 1,360) selectable
Lens	$4 \times \text{zoom Nikkor; } f = 8 \text{ to } 32$
	mm [35 mm (135) format equi- valent to 38–152 mm]; aper-
	ture 2.8 to 5.6 with macro;
	9 elements in 7 groups, all ele-
	ments are made of glass; Nikon Super Integrated (SIC) coating
	applied
Digital zoom	Up to $4 \times$ button-controlled digital zoom
Autofocus	Contrast-detect TTL AF; 5-area
	multi AF or spot AF selectable continuous autofocus (with use
	of LCD monitor)
	single AF
	manual (50 steps from 2 cm to infinity with focus confirmation
	indication)
Focusing range	30 cm to infinity, 2 cm to infinity with macro mode
LCD panel	1.8 inch TFT LCD panel with
	110,000 dots After 30 sec.; can be set
Auto-OFF power- safe mode	manually at 30 sec., 1, 5, or
<i>.</i>	30 min.
Storage system	CompactFlash™ type I and II (CF) card
Shooting modes	Fully automatic mode; shutter-
	priority auto; aperture-priority auto; manual; custom modes
Shooting menu	White balance; exposure me-
	tering; continuous; Best-Shot Selector (BSS) function; noise
	reduction; saturation control;
	image adjustment (auto, nor- mal, more contrast, less con-
	trast, lighten, darken, mono-
	chrome); image sharpening;
	image size/quality; sensitivity; focus; exposure; directory
	settings and card formatting
	(digital zoom up to $4 \times mag-$ nification)
Capture modes	Single frame; continuous;
	multi-shot mode (16 frames in 1/16 size); VGA image sequen-
	ces; ultra high-speed contin-
	uous shots with approx. 30 fps for 80 QVGA-size images (reso-
	lution 320 $\times$ 240 pixels); film
	sequence mode (playback of
	QVGA images for 40 sec. with 15 images per sec. in quick-
	time)
Shutter	Mechanical and charge- coupled electronic shutter;
	shutter speeds between 8
Aperture	and 1/2300 sec. and bulb Iris diaphragm with 7 blades,
. percare	10 steps in 1/3 EV increments
Exposure control	selectable Programmed auto; shutter
Exposure control	priority auto; aperture-priority
	auto; manual







Exposure	± 2 EV in 1/3 EV steps; auto-
compensation	matic exposure bracketing
	(5 steps within $\pm 2/3$ EV)
Exposure range	EV –2 to +15.5 (W) EV –0.8 to +16.7 (T),
	ISO 100 equivalent
Sensitivity	Approx. ISO 100 equivalent,
	100, 200, 400, 800 and auto;
	can be controlled in any expo-
White balance	sure mode Matrix auto white balance with
	TTL control; 5-mode manual
	setting with compensation func-
	tions (sun, light-bulb, fluores-
	cent, daylight, cloudy, speed-
	light) with $\pm$ fine tuning; white
Self timer	balance bracketing 10 sec. or 3 sec. timer duration
Built-in speedlight	Pop-up type: guide number 10
p	(at ISO 100);
	flash range:
	approx. 0.4–2.5 m (T)
	approx. 0.4–3.7 m (W) approx. 0.2–2.5 m (macro in T)
Speedlight control	Sensor flash system
Speedlight modes	Auto flash; flash cancel; any-
	time flash; slow sync; red-eye
Dischard, and an environment	reduction mode
Playback menu	Quick review; full frame, film sequence, thumbnail (4 or 9
	pictures); presentation mode
	(slide show); zoom playback
	(continuous up to 4 $\times$ magnifi-
	cation); histogram indication
	and highlight point display; focus confirmation indication;
	hide and protect attributes can
	be set to each image
Delete functions	Delete all frames or selected
Inter to an	frames
Interface Video output	USB interface NTSC or PAL selectable
I/O terminal	Power input; video output;
	digital interface (USB), external
	speedlight
Power source	Rechargeable lithium-ion
	EN-EL1 battery; AC adapter/ charger MH-50
Battery life	Approx. 110 min. when using
,	the LCD monitor (at normal
	temperature of 20° C)
Dimensions	Approx. $140 \times 82 \times 40 \text{ mm}$
Weight	(W $\times$ H $\times$ D) Approx. 390 g
Traight	(without batteries)
	,





System requirements Windows® USB System: Windows® 98/98SE Windows® 2000 Windows® ME or later (preinstalled version) CPU: MMX® Pentium or later

System requirements	Macintosh® System: Mac® OS8.6 or later (only built-in USB ports supported)
Types	iMac <sup>™</sup> iBook <sup>™</sup> , Power Macintosh® G3 (blue/white), PowerMac <sup>™</sup> G4 or later; PowerBook® G3 (with built-in USB port) or later

### Standard accessories:

Battery pack EN-EL1 Battery charger MH-50 Lens cap, neck strap Video cable 16 MB CompactFlash™ card USB cable

#### Standard software:

Nikon View Version 3 (CD-ROM) Photoshop® 5.0 LE (CD-ROM) Photostation 4.0 (CD-ROM)

### Optional accessories:

Bag CS-E995 Rechargeable lithium-ion battery EN-EL1 AC adapter EH-21 CompactFlash cards PC card adapter EC-AD1 Remote control MC-EU1 Teleconverter TC-E2 (2×) and TC-E3ED (3×) Wide-angle converter WC-E24 and WC-E63 Fisheye converter FC-E8 Slide copy adapter ES-E28

# Nikon Coolpix 885

Order code	VAA114EA black VAA114EC silver
Camera type	Digital compact camera
CCD Sensor	1/1.8 inch CCD with
	3.31 million pixels
Resolution	2048 × 1536 pixels
Lens	3× zoom-Nikkor; 8 to 24 mm
	lens (35 mm camera format
	equivalent to 38 to 114 mm);
	f/2.8 to 4.9
Digital zoom	Button controlled 4× digital
	zoom in steps
Autofocus (AF)	Contrast-detect TTL; continuous
_	AF (monitor on), single AF
Focus range	30 cm to infinity; 4 cm to infini-
LCD monitor	ty in macro mode 1.5-inch, 110,000-dot TFT LCD
	monitor with 5-step brightness
	adjustment
Auto-OFF	After 30 sec.; can be set man-
power-safe mode	ually at 30 sec., 1.5, or 30 min.
Storage media	CompactFlash™ (CF) card
5	type I
Shooting modes	Auto; menu options: portrait,
	party/indoor, night portrait,
	landscape, museum, fireworks
	show, beach/snow, sunset, close
<b>.</b>	up, back light, night landscape
Custom settings	CSM function; white balance,
	metering, shooting mode, fine tuning (auto, standard, more
	contrast, less contrast, brighter,
	darker), image sharpening, ima-
	ge size & quality, sensitivity, ex-
	posure options, focus options,
	directory settings and card for-
	matting; movie mode
Capture modes	Single, continuous, multi-shot
	16 (16 frames 1/16 in size),
	VGA sequence, ultra high speed
	continuous (70 QVGA images
	at approx. 30 fps)
Shutter	Mechanical and electronic
	shutter; speeds: 8 to 1/1000
Aporturo	sec., bulb up to 60 sec. 7-blade iris diaphragm,
Aperture	10 aperture steps selectable
Exposure modes	Programmed auto and manual
Exposure	$\pm$ 2 EV in 1/3 EV steps; auto
compensation	exposure bracketing
Exposure range	EV –3 to +15 (wide angle),
-	EV -1.4 to +16.6 (telephoto),
	(ISO 100 equivalent)
Sensitivity	ISO 100 equivalent; 200, 400,
144 1 L	auto: can be set in CSM mode
White balance	Auto with TTL control; 5 ma-
	nual modes with fine tuning (sun, light-bulb, fluorescent,
	(sun, light-buib, fluorescent, daylight, cloudy, speedlight)
Self timer	10 sec. or 3 sec. duration
Built-in speedlight	Guide number 7 at ISO 100;
- and in specialization	range:
	approx. 0.4 – 2.3 m (T)
	approx. 0.4 – 3.7 m (W)
Flash modes	Auto, flash cancel (off), anytime
	flash (fill-flash), slow sync, red-
	eye reduction





Dalata mada	Deletes all or selected frames
Delete mode Computer interface	USB interface
Video output	Selectable, NTSC or PAL
I/O terminal	Power input; video output; digi-
	tal interface (USB/serial)
Power source	Rechargeable EN-EL1 Li-ion
Tower Source	battery
Battery life	Approx. 90 min, when using
	monitor (at 20°C/68°F)
Dimensions	Approx. 95 $\times$ 69 $\times$ 52 mm
	$(W \times H \times D)$
Weight	Approx. 225 g (without batte-
	ries)
System requirements	Windows®
USB	
	System: Windows <sup>®</sup> 98/98SE, Windows <sup>®</sup> 2000,
	System: Windows <sup>®</sup> 98/98SE,
	System: Windows® 98/98SE, Windows® 2000,
	System: Windows® 98/98SE, Windows® 2000, Windows® ME or later
	System: Windows® 98/98SE, Windows® 2000, Windows® ME or later (pre-installed version) CPU: MMX® Pentium or later
USB	System: Windows® 98/98SE, Windows® 2000, Windows® ME or later (pre-installed version) CPU: MMX® Pentium or later
USB	System: Windows® 98/98SE, Windows® 2000, Windows® ME or later (pre-installed version) CPU: MMX® Pentium or later Macintosh®
USB	System: Windows® 98/98SE, Windows® 2000, Windows® ME or later (pre-installed version) CPU: MMX® Pentium or later Macintosh® System: Mac® OS8.6 or
USB	System: Windows® 98/98SE, Windows® 2000, Windows® ME or later (pre-installed version) CPU: MMX® Pentium or later Macintosh® System: Mac® OS8.6 or later (only built-in USB ports
USB System requirement	System: Windows® 98/98SE, Windows® 2000, Windows® ME or later (pre-installed version) CPU: MMX® Pentium or later Macintosh® System: Mac® OS8.6 or later (only built-in USB ports are supported) iMac™, iBook™, Power Macintosh®
USB System requirement	System: Windows® 98/98SE, Windows® 2000, Windows® ME or later (pre-installed version) CPU: MMX® Pentium or later Macintosh® System: Mac® OS8.6 or later (only built-in USB ports are supported) iMac™, iBook™, Power Macintosh® G3 (blue and white),
USB System requirement	System: Windows® 98/98SE, Windows® 2000, Windows® ME or later (pre-installed version) CPU: MMX® Pentium or later Macintosh® System: Mac® OS8.6 or later (only built-in USB ports are supported) iMac™, iBook™, Power Macintosh® G3 (blue and white), PowerMac™
USB System requirement	System: Windows® 98/98SE, Windows® 2000, Windows® ME or later (pre-installed version) CPU: MMX® Pentium or later Macintosh® System: Mac® OS8.6 or later (only built-in USB ports are supported) iMac™, iBook™, Power Macintosh® G3 (blue and white),

G3 (with USB built-in) or later





### Supplied with: Battery pack EN-EL1

Battery charger MH50 Lens cap, neck strap Video cable 8 MB CompactFlash™ card USB cable

#### Supplied software: Nikon View Ver. 4 (CD-ROM)

Photoshop® 5.0 LE (CD-ROM) Photostation Easy

#### **Optional accessories:** Rechargeable lithium-ion battery EN-EL1 AC adapter EH-21

CompactFlash memory cards PC card adapter EC-AD1 Adapter for converter URE4

# Nikon Coolpix 775

•	
Order code	VAA115EA
Camera type	Digital camera
CCD sensor	1/2.47 inch CCD
	with 2.01 million pixels
Image size	$1,600 \times 1,200$ pixels
Lens	$3 \times \text{zoom Nikkor; } f = 5.8-17.4$
Lens	mm [35 mm (135) format equi-
	valent to 38–115 mm); aper-
	ture 2.8 to 5.6
Digital zoom	Up to $2.5 \times$ button-controlled
Digital 20011	digital zoom
Autofocus	Contrast-detect TTL AF; con-
Autolocus	tinuous autofocus (with use of
	LCD monitor); single AF
Focusing range	30 cm to infinity; 4 cm to
Focusing range	infinity in macro mode
ICD nanal	1.5 inch TFT-LCD panel with
LCD panel	110,000 dots; 5 grades of
	brightness selectable
Auto-OFF	After 30 sec.; can be set man-
	ually at 30 sec, 1, 5 or 30 min.
power-safe mode	CompactFlash <sup>™</sup> type I
Storage system	(CF) card
Shooting modes	Fully automatic mode;
Shooting modes	menu settings: film sequence,
	play and 7 subject status pro-
	grams; party, night, portrait,
	landscape, beach, snow, sunset
Shooting menu	White balance; exposure met-
Shooting menu	ering; continuous; Best-Shot
	Selector (BSS); image adjust-
	ment (auto, normal, more con-
	trast, less contrast, lighten,
	darken, monochrome); image
	sharpening; image size/quality;
	sensitivity; exposure; focus;
	directory settings and card for-
	matting (digital zoom up to
	$2.5 \times \text{magnification}$
Capture modes	Single frame; continuous; multi-
Capture modes	shot mode (16 frames in 1/16
	size); VGA image sequences;
	ultra high-speed continuous
	shots with approx. 30 fps for
	80 QVGA-size images (320 $\times$
	240 pixels); film sequence
	mode (playback of QVGA
	images for 40 sec. with 15
	images per sec. in quicktime)
Shutter	Mechanical and electronic
Juller	shutter; shutter speeds of
	between 8 and 1/1000 sec.
Dianhragm	Iris diaphragm with 7 blades,
Diaphragm	10 steps in 1/3 EV increments
	selectable
	JUCCUDIC





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13

Exposure control	Programmed auto; shutter-
	priority auto; aperture-priority
F	auto; manual
Exposure	± 2 EV in 1/3 EV steps; auto- matic exposure bracketing
compensation	(5 steps within $\pm 2/3$ EV)
Exposure range	EV -2 to +15.5 (W); EV -0.8 to
	+16.7 (T), ISO 100 equivalent
Sensitivity	Approx. ISO 100 equivalent
White balance	Matrix auto white balance with
	TTL control; 5-mode manual setting with compensation func-
	tions (sun, light-bulb, fluores-
	cent, daylight, cloudy, speed-
	light)
Self timer	10 sec. or 3 sec. timer duration
Built-in speedlight	Guide number 7 (at ISO 100);
	flash range:
	approx. 0.4–2.5 m (T) approx. 0.4–3.7 m (W)
	approx. 0.2–2.5 m (macro in T)
Speedlight control	Sensor flash system
Speedlight modes	Auto flash
	flash cancel
	anytime flash
	slow sync
Blauback monu	red-eye reduction mode Quick review
Playback menu	full frame
	film sequence
	thumbnail (4 or 9 pictures)
	presentation mode (slide show)
	zoom playback (continuous up
	to $4 \times$ magnification) hide and protect attributes can
	be set to each image
Delete functions	Delete all frames or selected
	frames
Interface	USB interface
Video output	NTSC or PAL selectable
I/O terminal	Power input; video output; digital interface (USB/serial)
Power source	Rechargeable lithium-ion
Tower source	EN-EL1 battery; AC adapter/
	charger MH-50
Battery life	Approx. 110 min. when using
	the LCD monitor (at normal
Dimensio	temperature of 20° C)
Dimensions	Approx. 87 $\times$ 66.5 $\times$ 44 mm
Weight	$(W \times H \times D)$ Approx. 185 g
magne	(without batteries)
	(





System requirements USB	Windows® System: Windows® 98/98SE Windows® 2000 Windows® ME or later (preinstalled version) CPU: MMX® Pentium or later
System requirements	Macintosh® System: Mac® OS8.6 or later (only built-in USB ports sup- ported)

Types iMac<sup>™</sup> iBook<sup>™</sup>, Power Macintosh<sup>®</sup> G3 (blue/white), PowerMac<sup>™</sup> G4 or later; PowerBook<sup>®</sup> G3 (with built-in USB port) or later

### Standard accessories:

Battery pack EN-EL1 Battery charger MH-50 Lens cap, neck strap Video cable 8 MB CompactFlash™ card USB cable

Standard software: Nikon View Version 4 (CD-ROM) Photoshop<sup>®</sup> 5.0 LE (CD-ROM) Photostation Easy

### **Optional accessories:**

Rechargeable lithium-ion battery EN-EL1 AC adapter EH-21 CompactFlash cards PC card adapter EC-AD1

# Modes and No of frames (approx.) with 96 MB CF Card Modi e N° fotogrammi appross. con CF Card 96 MB

	D1X	D1H	E5000	E995/885	E775	
Pixel	3008×1960	2000×1360	2560×1920	2048×1360	1600×1200	Pixel
RAW (uncompressed)	11	23	-	-	-	RAW (senza compressione)
Hi (uncompressed YCbCR-TIFF)	8	18	_	-	-	Hi (YCbCr-TIFF senza compressione)
Hi (uncompressed RGB-TIFF)	5	12	6	9	-	Hi (RGB-TIFF senza compressione)
Fine (approx. 1/4 compressed)	29	65	35	60	96	Fine (compressione circa 1/4)
Normal (approx. 1/8 compressed)	58	128	70	120	192	Normal (compressione circa 1/8)
Basic (approx. 1/16 compressed)	114	246	150	240	384	Basic (compressione circa 1/16)

### Remote cord release MC-EU1

This cable permits remote zoom setting, interval shooting, playback, and LCD illumination on/off. Display shows set mode and number of frames available.

Order code	FAW11901
Supported digital	Nikon Coolpix 880/990/995
cameras	(firmware version 1.1 or later)
Shooting intervals	2 minutes to 24 hours
Data transfer rate	19.2 kHz
Power source	1 lithium battery (CR2032)
Weight	Approx. 58.5 g (without
	battery)
Dimensions	Approx. 13 × 38 × 99 mm
	$(H \times W \times D)$
Length of cord	Approx. 80 cm



### Slide copying adapter ES-E28

When attached to camera, this copy adapter allows digital copying of 35 mm films (slide films and negative films).

Order code	١
Dimensions	7
Diameter of filter	5
Diameter of mount	2
Weight	Α
-	

VAW12101 70 mm  $\emptyset \times 53$  mm 52 mm  $\emptyset$ 28 mm  $\emptyset$ Approx. 120 g (without film holder)





# AC adapter/battery charger EH-21 for Coolpix 5000/995/885/775

- Order code **Rated input** Rated output Charging
- VAK112EA 100-240 V (50/60 Hz) 8.4 V/1.3 A approx. 2 hours

# Lithium-ion battery pack EN-EL1

for Nikon 5000/995/885/775

Order code Туре

**Rated output** 

Dimensions

Weight

VAW12001 Rechargeable lithium-ion battery pack 7.4 V/650 mAh Approx. 16 × 32 × 52 mm  $(H \times W \times D)$ Approx. 45 g (without protective cover)





# Battery charger MH-50

to EN-EL1

Order code Rated input Charging voltage Charging

VAK116EA 100-240 V (50/60 Hz) 8.4 V/120 mAh approx. 6.5 hours



#### Battery charger MH-52 to EN-EL1

Order code Rated input Charging voltage Charging

VAK118EA 100-240 V (50/60 Hz) 8.4 V/550 mAh approx. 2.5 hours

# Battery pack MB-E 5000

for six Batteries 1.5 V LR 6

Order code

VAW13001

## Step-down ring UR-E3

For Coolpix 775 as adapter for tele and wide angle converter, or for slide coping adapter.

Order number VAW12401

### Step-down ring UR-E4

For Coolpix 885 as adapter for tele and wide angle converter, or for slide coping adapter.

Order number VAW12501

### Step-down ring UR-E5

For Coolpix 5000 as adapter for wide angle converter WC-E68

Order number VAW12701

### Step-down ring UR-E6

For Coolpix 5000 as adapter for tele converter TC-E2, wide angle converter WC-E24, or Fisheye converter FC.E8.

Order number VAW12801

# Step-down ring UR-E7

For Coolpix 775 with UR-E3 as adapter for wide angle converter WC-E68. For Coolpix 885 with UR-E3 as adapter for wide angle converter WC-E68.

VAW12901

Order number

## PC card adapter EC-AD1

For Compact Flash memory card

 
 Order code
 VAW11301

 Weight
 Approx. 24 g

 Dimensions
 Approx. 54 × 85.6 × 5 mm (H × W × D)

### Multi-flash bracket unit SK-E900

Bracket with cable and ISO flash shoe. Enables use of external flash unit for the Coolpix 990 (automatic and manual operation).

Order code

VAW11601

# Multi-flash adapter AS-E900

Enables use of external flash unit (automatic and manual operation).

Order code

VKA1309







# AC adapter EH-4

for Nikon D1/D1H/D1X

Order code Rated output Operating temperature . Dimensions Weight

VAK109EA Rated input/frequency 100-240 V; 50-60 Hz 9 V direct voltage 0–40° C 72 × 120 × 28 mm  $(W \times H \times D)$ 380 g



# Quick charger MH-16 for Nikon D1/D1H/D1X

Order code	VAK108EA
Charging	Charging is completed after
	approx. 90 minutes (indicated
	by charging light). Charging
	and discharging is done
	successively. Full charging,
	incl. discharge, after approx.
	8 hours
Rated input/	
frequency	100–240 V; 50/60 Hz
Charging voltage	8.7 V/1.4 A (changes
	automatically to 1.2 A)
<b>Compatible batteries</b>	Nikon Ni-MH battery pack EN-4;
	EN-3 and MN-15
Dimensions	Approx. 70 $\times$ 46 $\times$ 150 mm
	$(W \times H \times D)$
Weight	Approx. 250 g (without mains
-	cable)



# Ni-MH battery pack EN-4 for Nikon D1/D1H/D1X

Order code Battery type	VAW11421 Rechargeable nickel-metal- hybrid batteries
Electrical power	7.2 V/2000 mAh
Dimensions	Approx. 62 × 119 × 40 mm



### IEEE 1394 cable SC-D1 SCD1 FireWire cable

Order	code
Conne	ection
Lengt	h

VAG11001 6 pin–6 pin . 2 m



### Converter TC-E2 tele

VAF00211 Order code Focal length  $2.0 \times \text{focal length of lens in use}$ Combined focal length 190 mm Optical construction 2 elements in 4 groups Aperture F/4 Picture angle 11° Minimum distance 110 cm Dimensions  $65 \oslash \times 45 \text{ mm}$ Weight 168 g

## Converter TC-E3ED tele

Order code VAF00221 Focal length  $3.0 \times \text{focal length of lens in use}$ Combined focal length 285 mm Optical construction 4 elements in 2 groups Aperture F/4 Picture angle 70 Minimum distance 1.5 m Dimensions 75 Ø × 78.6 mm Weight 260 g

## Converter WC-E24 wide angle

Order code VAF00201 Focal length  $0.66 \times \text{focal length of lens in use}$ Combined focal length 25 mm Optical construction 2 elements in 2 groups Aperture f/2.5 Picture angle 86° Minimum distance 12 cm Dimensions 49.5 Ø × 25 mm Weight 65 g

# Converter WC-E63 wide angle

Order code VAF00231 Focal length  $0.63 \times \text{focal length of lens in use}$ Combined focal length 24 mm Aperture f/2.5 Optical construction 4 elements in 4 groups Picture angle 86° Minimum distance 12 cm Dimensions 75 Ø × 33.8 mm

## Converter WC-E68 wide angle

Order code VAF00241 0.68× focal length of lens in use Focal length Combined focal length 19 mm f/2.8 Aperture Picture angle 990 Minimum distance 3 cm

# Converter FC-E8 fisheye

Order code VAF00202  $0.21 \times \text{focal length of lens in use}$ Focal length Combined focal length 8 mm Optical construction 5 elements in 4 groups Aperture f/2.5 Picture angle 183° Minimum distance 5 cm  $74 \oslash \times 50 \text{ mm}$ Dimensions Weight 205 g











Weight 205 q

# Coolscan LS IV ED

35 mm/IX240 Film Scanner

Order code	VRA536EA
Film type	35 mm (135)/IX240 film,
r iiii type	slide glass for microscope
Resolution	2,900 ppi
Adapter and holder	Slide mount adapter MA-20(S);
Auapter and noider	strip film adapter SA-21
	(2 to 6 frames); strip film hol-
	der FH-3 (1 to 6 frames);
	IX240 film adapter IA-20(S)
	(15/25/40 frames; optional)
<b>.</b>	optional
Scanning area (max.)	(2010 x 38 mm
Effective	(2,870 × 4,332 pixels)
scanning area	SA-21: 23.3 × 36.0 mm
(size/pixels)	(2,657 × 4,101)
	MA-20(S): $25.1 \times 36.8 \text{ mm}$
	(2,870 × 4,203)
	$FH-3: 24.0 \times 36.0 \text{ mm}$
	(2,736 × 4,104)
	$IA-20(S): 16.1 \times 26.9 \text{ mm}$
	(1,836 × 3,067)
	FH-G1: 22.9 $\times$ 35.0 mm
Linkt course	(2,610 × 3,989)
Light source Colour separation	R, G, B and D-LED array
	RGB line sequential
Imaging optics	Scanner Nikkor ED lens
	(7 elements in 4 groups includ-
Fe avaia a	ing 3 ED glass elements) Auto focus and manual focus
Focusing	Auto focus and manual focus
SCANNING / SIGNAL Scan time	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with
	Approx. 42 sec. at 2,900 ppi;
	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom
Scan time Scanning density	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off)
Scan time	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6
Scan time Scanning density Thumbnail scanning	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6
Scan time Scanning density Thumbnail scanning	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge:
Scan time Scanning density Thumbnail scanning and batch scanning	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE™; Digital ROC™;
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE™; Digital ROC™;
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE™; Digital ROC™; Digital GEM™
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system DATA TRANSFER	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE™; Digital ROC™; Digital GEM™ Built-in
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE™; Digital ROCTM; Digital GEMTM Built-in USB 1.1 12 Mbits/sec.
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system DATA TRANSFER	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE™; Digital ROC™; Digital GEM™ Built-in
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system DATA TRANSFER Interface	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE <sup>TM</sup> ; Digital ROC <sup>TM</sup> ; Digital GEM <sup>TM</sup> Built-in USB 1.1 12 Mbits/sec. (1.5 Mbytes/s)
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system DATA TRANSFER Interface OPERATING CONDITI	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE <sup>TM</sup> ; Digital ROC <sup>TM</sup> ; Digital GEM <sup>TM</sup> Built-in USB 1.1 12 Mbits/sec. (1.5 Mbytes/s)
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system DATA TRANSFER Interface OPERATING CONDITI	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE <sup>TM</sup> ; Digital ROC <sup>TM</sup> ; Digital GEM <sup>TM</sup> Built-in USB 1.1 12 Mbits/sec. (1.5 Mbytes/s) <b>ONS</b> 100~240 VAC; 0.3~0.2 A;
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system DATA TRANSFER Interface OPERATING CONDITI Power requirements	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE <sup>TM</sup> ; Digital ROC <sup>TM</sup> ; Digital GEM <sup>TM</sup> Built-in USB 1.1 12 Mbits/sec. (1.5 Mbytes/s)
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system DATA TRANSFER Interface OPERATING CONDITI Power requirements Environmental	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE™; Digital ROC™; Digital GEM™ Built-in USB 1.1 12 Mbits/sec. (1.5 Mbytes/s) ONS 100~240 VAC; 0.3~0.2 A; 50/60 Hz
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system DATA TRANSFER Interface OPERATING CONDITI Power requirements Environmental temperature	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE™; Digital ROC™; Digital GEM™ Built-in USB 1.1 12 Mbits/sec. (1.5 Mbytes/s) ONS 100~240 VAC; 0.3~0.2 A; 50/60 Hz 10~35°C
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system DATA TRANSFER Interface OPERATING CONDITI Power requirements Environmental temperature Relative humidity	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE™; Digital ROCTM; Digital GEMTM Built-in USB 1.1 12 Mbits/sec. (1.5 Mbytes/s) ONS 100~240 VAC; 0.3~0.2 A; 50/60 Hz 10~35°C 20~60% (non-condensing)
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system DATA TRANSFER Interface OPERATING CONDITI Power requirements Environmental temperature	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE <sup>TM</sup> ; Digital ROC <sup>TM</sup> ; Digital GEM <sup>TM</sup> Built-in USB 1.1 12 Mbits/sec. (1.5 Mbytes/s) ONS 100~240 VAC; 0.3~0.2 A; 50/60 Hz 10~35°C 20~60% (non-condensing) 93 × 169 × 315 mm
Scan time Scanning density Thumbnail scanning and batch scanning A/D conversion Output data Digital ICE3™ Colour management system DATA TRANSFER Interface OPERATING CONDITI Power requirements Environmental temperature Relative humidity	Approx. 42 sec. at 2,900 ppi; 8-bit output (scan time with display on screen if custom settings are off) 3.6 35 mm (135) strip film: 2 to 6 frames; IX240 film cartridge: 15/ 25/40 frames (optional) 12 bits 16 bits or 8 bits per colour channel, user selectable Digital ICE™; Digital ROCTM; Digital GEMTM Built-in USB 1.1 12 Mbits/sec. (1.5 Mbytes/s) ONS 100~240 VAC; 0.3~0.2 A; 50/60 Hz 10~35°C 20~60% (non-condensing)



### Supplied with:

Slide mount adapter MA-20(S) Automatic strip film adapter SA-21 Strip film holder FH-3 USB cable

### Standard software:

Nikon scan 3.× driver software Adobe Photoshop 5.0 LE PhotoStation 4.5 SilverFast 5

### System requirements for Windows®

CPU	For Windows®
	MMX Pentium 166 MHz or
	later (Pentium II or later
	recommended)
OS	Windows 98 SE (second
	edition); Windows ME;
	Windows 2000 or later
RAM	32 MB (64 MB or more are
	recommended)

### System requirements for Macintosh®

CPU	For Macintosh®
	Power PC G3 or later
	(Power PC G4 or later recommended)
05	System 8.6 or later
RAM	24 MB (64 MB or more
	recommended)
Hard disk space (HD)	20 MB free for installation
	with additional 20 MB
	available while Nikon Scan
	is running (200 MB or more
	recommended, or 400 MB or
	more when using Digital
	ROC <sup>™</sup> or Digital
	GEM™).
	A minimum of 128 MB RAM is
	required when using Digital
	Miscellaneous ROC <sup>™</sup> , Digital
	GEM <sup>™</sup> or IX240 film adapter
	IA-20(S) (optional). Additional memory is required for further
	applications, or if Nikon Scan 3
	functions as a Twain source.
Remark	The scanner may not function as expected when connected
	to a USB hub.

# Coolscan LS 4000 ED

35 mm/IX240 Film Scanner

Order code	VRA535EA
Film type	35 mm (135)/IX240 film, slide
	glass for microscope
Resolution	4,000 ppi
Adapter and holder	Slide mount adapter MA-20(S);
•	strip film adapter SA-21
	(2 to 6 frames); strip film hol-
	der FH-3 (1 to 6 frames);
	IX240 film adapter IA-20(S)
	(15/25/40 frames, optional);
	roll film adapter SA-30, optio-
	nal; slide feeder SF-200 (S),
	optional; medical slide holder,
	optional
Scanning area (max.)	
Effective area	$(3,946 \times 5,959 \text{ pixels})$
(size/pixels)	SA-21: 23.3 × 36.0 mm
(SIZCI PINCIS)	$(3.654 \times 5.646)$
	$MA-20(S): 25.1 \times 36.8 \text{ mm}$
	(3,946 × 5,782)
	$FH-3: 24.0 \times 36.0 \text{ mm}$
	(3,762 × 5,646)
	$(3,702 \times 3,310)$ IA-20(S): 16.1 × 26.9 mm
	(2,525 × 4,219)
	$SA-30: 23.3 \times 36.0 \text{ mm}$
	(3,654 × 5,646)
	$SF-200(S): 25.1 \times 36.8 \text{ mm}$
	(3,946 × 5,488)
	$FH-G1: 22.9 \times 35.0 \text{ mm}$
	(3,591 × 5,488)
Light source	R, G, B and D-LED array
Colour separation	RGB line sequential
Imaging optics	Scanner Nikkor ED lens
5	(7 elements in 4 groups
	including 3 ED glass elements)
Focusing	Auto focus and manual focus
5	



#### SCANNING/SIGNAL PROCESSING

Scan time	Approx. 38 sec. at 4,000 ppi;
	16-bit output (scan time with
	display on screen if custom
	settings are off)
Density range	4.2
Thumbnail scanning	35 mm (135) strip film: 2 to 6
and batch scanning	frames; IX240 film cartridge:
-	15/25/40 frames (optional);
	35mm (135) strip film with SA
	30: 2 to 40 frames; 35 mm
	(135) mount film with SF 200:
	1 to 50 frames
A/D conversion	14 bit
Output data	16 bit or 8 bit per colour
	channel, user selectable
Digital ICE3™	Digital ICE™, Digital ROC™,
5	Digital GEM™
Multi-sample	2, 4, 8, or 16 times,
scanning	user selectable
Colour management	
system	Built-in
### DATA TRANSFER

### Interface FireWire IE

FireWire IEEE1394

## **OPERATING CONDITIONS**

# Power requirements 100~240 VAC; 0.3~0.2 A; 50/60 Hz

Environmental	
temperature	10~35 °C
Relative humidity	20~60 % (no
Dimensions	93 × 169 ×
	(W × H × D
Weight	3 ka

## Weight

20~60 % (non-condensing) 93 × 169 × 315 mm (W × H × D) 3 kg

## Supplied with:

Slide mount adapter MA-20(S) Automatic strip film adapter SA-21 Strip film holder FH-3 FireWire board IEEE1394 FireWire cable IEEE1394 (6 pin–6pin)

## Standard software:

Nikon Scan 3.× driver software FotoStation 4.5 SilverFast 5

## System requirements for Windows®

СРИ	For Windows <sup>®</sup> MMX Pentium 166 MHz or later (Pentium II or later recommended)
OS	Windows 98 SE (second edition); Windows ME; Windows 2000 or later
RAM	64 MB (128 MB or more are recommended)

## System requirements for Macintosh®

For Macintosh <sup>®</sup>
Power PC G3 or later
(Power PC G4 or later
recommended)
System 8.6 or later
640 $ imes$ 480 pixels or greater
with 16-bit RGB colour or more
The scanner may not function as expected when connected to a USB hub.

# Memory requirements for Windows® and Macintosh®

RAM	64 MB (128 MB or more are recommended)
Hard disk space (HD)	20 MB free for installation with additional 20 MB available while Nikon Scan is running (200 MB or more recommend- ed, or 400 MB or more when using Digital ROC <sup>™</sup> or Digital GEM <sup>™</sup> ).

## Super Coolscan LS 8000 ED

Multi-format film scanner for 35 mm and medium format

## **OPTICS / READING SYSTEM**

Order code	VRA516EA
Film type	Medium format (120/220); 35
	mm (135), 35 mm panorama;
	16 mm; electron microscope;
	slide glass for microscope
Reading resolution	4000 ppi

#### Scanning area (max.)

Effective area 63.5 × 88 mm (10,000 × 13,860) (size/pixels) FH-835S 37.5 × 25.6 mm (5,905 × 4,032) FH-835M 25.4 × 37.5 mm (4,000 × 5,904) FH-869S/FH-869G  $(6 \times 4.5)$ 56.9 × 42.5 mm (8.964 × 6.696)  $(6 \times 6)$ 56.9 × 56.9 mm (8,964 × 8,964) (6 × 7) 56.9 × 70.0 mm (8,964 × 11,016)  $(6 \times 8)$ 56.9 × 77.5 mm (8,964 × 12,204) (6 × 9) 56.9 × 83.7 mm (8,964 × 13,176) 56.9 × 83.7 mm (8,964 × 13,176) (electron microscope) FH-869GR  $(6 \times 4.5)$ 60.3 × 45.0 mm (9,496 × 7,092)  $(6 \times 6)$ 61.6 × 61.7 mm (9,700 × 9,720) (6 × 7) 62.8 × 74.5 mm (9,889 × 11,736)  $(6 \times 8)$ 63.4 × 80 mm (9,984 × 12,600)  $(6 \times 9)$ 63.5 × 88 mm (10,000 × 13,860) (electron microscope) 56.9 × 83.7 mm (8.964 × 13.176) 31.0 × 61.7 mm (4,876 × 9,720)

(panoramic  $24 \times 58$ )

#### FH-869M

(6 × 4.5, 6 × 6)  $(6 \times 6, 6 \times 7, 6 \times 9)$  56.9 × 83.7 mm (8,964 × 13,176) FH-816 FH-8G1

15.0 × 21.5 mm (2,362 × 3,384) 46.0 × 24.0 mm (7,248 × 3,780)

(35 mm panoramic  $24 \times 65$ ): 31.6 × 68.8 mm (4,972 × 10,836)

56.9 × 56.9 mm (8,964 × 8,964)

Illumination Imaging optics

Focusing

R, G, B and D-LED array Scanner Nikkor ED lens (14 elements in 6 groups including 6 ED glass elements) Auto focus and manual focus

### SCANNING / SIGNAL PROCESSING

Density range Thumbnail scanning	4.2
35 mm strip film:	2 to 12 frames (2 strips)
and batch scanning	
35 mm mount film:	1 to 5 frames
120/220 strip film:	1 to 4 frames 120/220 (6 x 4.5)
120/220 mount film:	1 to 2 frames
16 mm film:	1 to 60 frames (3 strips)
A/D conversion	14 bit
Output data	16 bits or 8 bits per colour
	channel, user selectable
Digital ICE3™	Digital ICE™; Digital ROC™;
-	Digital GEM™
Multi-sample	2, 4, 8 or 16 times, user
scanning	selectable
Colour	

management system Built-in

#### DATA TRANSFER

#### Interface

IEEE1394 (FireWire)



### **OPERATING CONDITIONS**

# **Power requirements** 100~240 VAC; 0.3~0.2 A;

	50/60 Hz
Environmental	
temperature	10~35°C
Relative humidity	20~85 % (non-condensing)
Dimensions	245 × 200 × 485 mm
	$(W \times H \times D)$
Weight	9 kg
temperature Relative humidity Dimensions	20~85 % (non-condensing) 245 × 200 × 485 mm (W × H × D)

#### Supplied with:

35 mm film strip holder FH-835S 35 mm mounted film holder FH-835M 120/220 strip film holder FH-869S IEEE1394 (FireWire) board IEEE1394 (FireWire) cable (6 pin–6 pin) Nikon Scan 3.x driver software PhotoStation 4.5 SilverFast 5.x

#### Standard accessories:

120/220 mounted film holder FH-869M/VRW55303 120/220 strip film holder with glass FH-869G/VRW55401 120/220 film rotated holder with glass FH-869R/VRW55501 16 mm film holder FH-816/VRW55601 Medical slide holder FH-8G/VRW55701

### System requirements for Macintosh®

CPU	Power PC G3 or later (Power PC G4 or later recommended)
OS	System 8.6 or later
RAM	32 MB (64 MB or more recommended)
Interface	FireWire <sup>®</sup> Support 2.3.3 or later recommended. Built-in interface with FireWire <sup>®</sup> Support 2.0. If you are using an old model (G3 desktop beige), you can install the FireWire board that is provided.

### System requirements for Windows®

СРИ	MMX Pentium 166 MHz or later (Pentium II or later recommended)
OS	Windows 98 SE*3 (second edi- tion); Windows ME; Windows 2000 or later
RAM	32 MB (64 MB or more recom- mended)
Interface	OHCI-type interfaces are sup- ported. If your computer has an empty PCI slot but no FireWire interface, you can install the IEEE1394 (FireWire) board that is provided.

	Tabular summary Tavola sinottica		Nikon F3/ F3 HP/F3 Ti
	Nikon F5	Nikon Patria	Nikon FM3A
RIKON (SALE)	Nikon F100		
Nikon Poor COres	Nikon F90X		
Nikon PBO CO	Nikon F80		
Nikon 755 • v	Nikon F65		

# TABULAR SUMMARY • TAVOLA SINOTTICA

Nikon	F5	F100	F90X	F80	F65	F3HP	FM3A	Nikon
		*						
Autofocus								Autofocus
Single autofocus Focus priority Release priority	•	•	•	•	•	-	-	AF Singolo: Priorità alla messa a fuoco Priorità allo scatto
Continuous autofocus	-	-		-				AF Continuo:
Release priority Focus priority	•	•	•	•	•	-		Priorità allo scatto Priorità alla messa a fuoco
Focus tracking (moving subject)	•	•	•	•	•		_	Focus Tracking automatico con soggetto in movimento
Autofocus area	5	5		5	5	_	_	Area di messa a fuoco: centrale/ampia
Cross-type AF mode	•	_	•	_	_	_	_	Sensore a croce
Manual focus	•	•	•	•	•	•	•	Messa a fuoco manuale
Exposure modes			I					Controllo dell'esposizione
Programmed auto	Р	Р	Р	Р	Р	_	-	Auto-programmata
Flexible program	•	•	•	_	-	_	_	Programma flessibile
Vari-program	_	_	7	_	5	_	_	Vari-program
Shutter priority auto	•	•	•	•	•	-	-	Auto a priorità dei tempi
Aperture priority auto	•	•	•	•	•	•	•	Auto a priorità dei diaframmi
Manual	•	•	•	•	•	•	•	Manuale
Exposure metering			1	1		L	1	Misurazione dell'esposizione
3D-colour matrix	•	-	-	-	-	_	-	Color Matrix 3D
3D-matrix (with D-type AF lenses)	•	•	•	•	•	-	-	Matrix 3D (con obiettivi AF-D)
Matrix metering Number of segments	• 1005	● 10	• 8	● 10	• 6	-		Matrix Numero settori
Centre-weighted integral Variable	75/25%	75/25% _	75/25% -	75/25% -		80/20% -		Semi-spot (media ponderata) Flessibile
Spot	•	•	•	•	-	-		Spot
Exposure compensation	± 5 LW	± 5 LW	± 5 LW	± 3 LW	± 2 LW	± 2 LW	± 2 LW	Compensazione dell'esposizione
Exposure bracketing	•	•	with/con MF 26	•	-	-	_	Auto bracketing
Auto exposure lock	•	•	•	•	-	•	-	Memoria esposimetrica
Metering range (ISO 100): Matrix and/or integral	LW 0–20	LW 0–21	LW 1–21	LW 0–21	LW 1–20	LW 1–18	LW 1–20	Campo di misurazione (100 ISO) Matrix/Semi-spot
Spot metering	LW 2–20	LW 0-21	LW 3-21	LW 3-21	LW 1–20	-	-	Campo di misurazione: Spot
Shutter speeds								Tempi di posa
Automatic	1/8000-30 s	1/8000-30 s	1/8000-30 s	1/4000-30 s	1/2000-30 s	1/2000-8 s	1/4000-8 s	In automatica
Manual	1/8000–30 s B, (T)	1/8000–30 s B	1/8000–30 s B	1/4000–30 s B	1/2000-20 s -	1/2000–8 s B, T, X	1/4000-1 s B	In manuale
Adjustable in 1/3 EV steps	•	•	•	-	-	-	-	Con incrementi di 1/3 EV
Mechanical	-	-	-	-	-	1/60 s	-	Tempi meccanici
Flash synchronisation	1/250 s (1/300 s)	1/250 s	1/250 s	1/125 s	1/90 s	1/80 s	1/250 s	Sincro-flash
Viewfinder			1	I			I	Mirino
High eyepoint (HP)	•	-	•	-	-	•	-	A proiezione arretrata (HP)
Frame coverage	100%	96%	92%	92%	89%	100%	93%	Copertura dell'area ripresa
Interchangeable viewfinder	4	-	-	-	-	4	-	Mirino intercambiabile
Interchangeable viewfinder focusing screens	12	2	2	_	_	21	3	Schermi di messa a fuoco intercambiabili
Viewfinder information		L	1	1		L	1	Informazioni nel mirino
Shutter speed/aperture	•	٠	•	•	•	●	•	Tempo/diaframma
Metering system	•	•	_	•	_		_	Sistema di misurazione
Exposure modes	•	•	•	•	-	-	-	Modo di esposizione
Autofocus area	•	•	•	•	•	_	-	Area AF
Flash recommended	-	-	•	-	•	_	-	Raccomandazione uso flash
Frame counter	•	•	•	•	-	-	-	Contafotogrammi
Viewfinder illumination	•	_	•	-	-	•	-	Illuminazione display
Film	-	L	-	I		-	I	Film
Film speed range (ISO): Manual DX-coded film	6–6400 25–5000	6–6400 25–5000	6–6400 25–5000	6–6400 25–5000	_ 25–5000	12–6400 –	12–6400 25–5000	Gamma sensibilità (ISO) Regolazione manuale Regolazione automatica (DX)
Automatic film loading system	•	•	•	٠	٠	-	-	Caricamento automatico
Automatic film advance						with/con	with/con	Avanzamento automatico

Nikon	F5	F100	F90X	F80	F65	F3HP	FM3A	Nikon
Film rewind: automatic/manual	•/•	•/•	•/-	•/•	•/•	MD 4/●	MD 12/●	Riavvolgimento: motorizzato/manuale
Maximum shooting speed: frames per second (fps)	8	4.5	3.5	2.5	2.5	with/con MD 4 5.5	with/con MD 4 3.2	Cadenza massima: fotogrammi al secondo
Flash functions								Funzioni flash
Built-in speedlight Guide number (ISO 100) Angle of coverage				12 28 mm	• 12 28 mm	_ _ _		Flash incorporato Numero guida Copertura lunghezza focale
TTL automatic	•	•	•	•	•	•	•	Automatismo TTL
Matrix balanced fill flash	•	•	•	•	•	-	-	Bilanciamento automatico con misurazione Matrix
3D-balanced fill flash	•	•	with/con SB 28/27	•	•	-	-	Fill-flash con bilanciamento 3D
5-segment TTL sensor	•	•	•	-	-	-	-	Sensore TTL a cinque settori
Rear-curtain synchronisation	•	•	•	•	•	_	_	Sincro sulla seconda tendina (Rear)
Automatic slow synchronisation	•	•	•	•	•	_	_	Sincro a tempi lenti (slow)
Manual ± compensation	with/con SB 28/27	with/con SB 28/27	with/con SB 28/27	-	_	-	-	Compensazione manuale ± del lampo
Flash exposure bracketing	•	-	with/con MF 26	_	_	-	-	Compensazione automatica ± del lampo
Automatic zoom setting with SB 28/28DX/27	•	•	•	•	_	_	_	Predisposizione auto zoom dell parabola con SB 28/28DX/27
Red-eye reduction	-	_	with/con SB 28/27	•	•	-	-	Riduzione «occhi rossi»
FP high-speed synchronisation (1/250–1/4000 sec.)	with/con SB 28/27	-	with/con SB 28/27	-	_	-	-	Sincro FP con tempi rapidi (1/250–1/4000 sec.)
Repeating flash (strobo effect) with SB 28/28DX	•	•	•	-	-	•	-	Flash stroboscopio con SB 28/28DX
Flash sync terminal	•	•	•	-	-	•	-	Presa sincro PC
Other features								Varie
LCD panel	•	•	•	•	•	-	-	Display LCD
Depth-of-field preview button	•	•	•	•	•	•	•	Pulsante profondità di campo
Multiple exposure	•	•	with/con MF 26	•	-	•	-	Esposizione multiple
Self-timer (sec.) Two-shot self-timer	10 s -	10 s	2−30 s	10 s —	10 s —	10 s -	4–10 s –	Autoscatto Due scatti consecutivi
Standard cable release connector	•	-	-	•	-	•	•	Filettatura per flessibile meccanico
Remote-control terminal	•	•	•	-	•	with/con MD 4	with/con MD 12	Presa per flessibile elettrico
Terminal for Sharp® Electronic Organizer	-	-	•	-	_	-	-	Presa per Agenda Elettronica Sharp®
Terminal to personal computer	•	•	_	-	_	-	-	Collegamento a Personal Computer
Interchangeable camera back	•	•	•	-	•	•	•	Dorso intercambiabile
Power source Battery pack	8×LR6/AM3 ●	4×LR6/AM3 -	4×LR6/AM3 –	2×CR123 -	2×CR2	2×SR44/G13 (MD4)	CR1/3N	Alimentazione Alimentatore recaricabile
Dimensions (W×H×D)	158/149/79	155/113/66	154/106/69	141.5/98.5/71	139.5/93/65.5	148/96/65	142.5/90/58	Dimensioni (L $\times$ H $\times$ P)
Weight (without batteries)	1210 g	785 g	755 g	515 g	395 g	720 g	570 g	Peso (senza batterie)

## Nikon F5

Order code Type of camera	FAA320NA integral-motor, electronic autofocus reflex camera
Distance formant	
Picture format	24 × 36 mm
Lens mount Lenses	Nikon F bayonet mount all Nikkor AF-S, AF-I and AF-D
Lenses	lenses and – with certain limi-
	tations – all Nikkor AF and con-
	ventional Nikkor lenses
Focusing modes	
Focusing modes	autofocus and manual focusing
AE cottings	with electronic focusing aid
AF settings	single autofocus with focus priority: shutter can be released
	only when automatic focus is
	correctly set; continuous auto-
	focus with release priority:
	focus is continuously set and
	automatically activated when
	subject moves
AF area	five selectable focus areas
AF area modes	single area AF and dynamic AF,
Al alea moues	selectable
AF module	Nikon Multi-CAM 1300,
Al module	AF range: EV –1 to EV +19
	(at ISO 100)
AF lock	using the shutter release button
ALIOCK	for single AF; using the AF-L/
	AE-L button for continuous AF
Viewfinder	exchangeable DP-30 high-
nemmaer	eyepoint multi-meter finder
	provided as standard; 0.75×
	magnification with 50 mm lens
	set at infinity; approx. 100%
	frame coverage; metering sys-
	tem selector; dioptre adjust-
	ment; accessory shoe and
	eyepiece shutter; interchange-
	able with DA-30 Action Finder,
	DW-31 6× High-Magnification
	Finder or DW-30 Waist-Level
	Finder
Viewfinder	LCD display: metering system,
information	focus indicators, exposure mo-
	des, shutter, aperture, electronic
	analog display, frame counter/
	exposure compensation value
	and correction symbol, expo-
	sure level, ready LED, aperture
	direct-readout, focus area
	indicators
Focusing screen	Nikon EC-B; 12 different focus-
	ing screens are available as
	accessories
Top LCD panel	shows shutter speed, aperture,
	exposure modes, focus area
	and active area, flexible pro-
	gram, exposure compensation,
	frame counter, exposure com-
	frame counter, exposure com- pensation value, exposure
	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure,
	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/
Poor I CD popol	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition
Rear LCD panel	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film
Rear LCD panel	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus-
Rear LCD panel	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus- tom settings, flash exposure
Rear LCD panel	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus- tom settings, flash exposure bracketing and PC link connec-
·	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus- tom settings, flash exposure
LCD panel	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus- tom settings, flash exposure bracketing and PC link connec- tion
LCD panel illuminator	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus- tom settings, flash exposure bracketing and PC link connec- tion activated by the power switch
LCD panel	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus- tom settings, flash exposure bracketing and PC link connec- tion activated by the power switch 3D color matrix metering,
LCD panel illuminator	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus- tom settings, flash exposure bracketing and PC link connec- tion activated by the power switch 3D color matrix metering, center-weighted metering and
LCD panel illuminator	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus- tom settings, flash exposure bracketing and PC link connec- tion activated by the power switch 3D color matrix metering, center-weighted metering and spot metering: together with a
LCD panel illuminator	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus- tom settings, flash exposure bracketing and PC link connec- tion activated by the power switch 3D color matrix metering, center-weighted metering and spot metering: together with a AF-S/AF-I/AF-D/AF-P/AF-Nikkor
LCD panel illuminator	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus- tom settings, flash exposure bracketing and PC link connec- tion activated by the power switch 3D color matrix metering, center-weighted metering and spot metering: together with a AF-S/AF-I/AF-D/AF-P/AF-Nikkor lens, the 3D color matrix meter-
LCD panel illuminator	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus- tom settings, flash exposure bracketing and PC link connec- tion activated by the power switch 3D color matrix metering, center-weighted metering and spot metering: together with a AF-S/AF-I/AF-D/AF-P/AF-Nikkor lens, the 3D color matrix meter- ing evaluates each scene accord-
LCD panel illuminator	frame counter, exposure com- pensation value, exposure bracketing, multiple exposure, lock for shutter speed/aperture/ focus area, battery condition flash synchronization, film speed, symbol for DX and cus- tom settings, flash exposure bracketing and PC link connec- tion activated by the power switch 3D color matrix metering, center-weighted metering and spot metering: together with a AF-S/AF-I/AF-D/AF-P/AF-Nikkor lens, the 3D color matrix meter-

with AF-P/AF-lenses) and color





Exposure modes	Programmed auto
	Shutter-priority auto
	Aperture-priority auto
_	Manual
Exposure	with button in 1/3 EV steps
compensation	over ±5 EV
Auto exposure	by pressing AE-L/AF-L button
lock	while meter is on
Metering range	from EV 0 to EV 20 in 3D co-
	lor matrix and center-weigh-
	ted, EV 2 to EV 20 in spot (at
	ISO 100 with f/1.4 lens)
Film speed range	automatic for DX-coded film
	(ISO 25-5000), manual for
	films without DX coding
	(ISO 6 to 6400)
Shutter	electromagnetically con-
	trolled vertical-travel focal-
	plane shutter
Shutter speeds	automatic, continually adjus-
Survey Sheers	table speed between 1/8000
	to 30 s; adjustable in 1/3
	steps; electromagnetically
	controlled, low-speed bulb
Film Looding	setting
Film loading	automatic loading control
and advance	system and film advance to
e	1st frame
Settings	single frame (S)
	continuous, with approx.
	3 frames per second (CL)
	continuous, with approx.
	8 frames per second (CH)
	continuous silent, with
	approx. 1 frame per second
	(CS)
Frame counter	additive type; counts back
	when film is being rewound
Film rewind	automatic (approx. 6 sec. per
	36-exposure roll with AA-type
	batteries or 4 sec. with Ni-MH
	batteries or 4 sec. with Ni-MH battery unit) or manual
	battery unit) or manual rewind; stops automatically
	battery unit) or manual
Self-timer	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled;
Self-timer	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled;
Self-timer	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED
Self-timer	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled;
	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable
Depth-of-field	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to
	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo-
Depth-of-field preview button	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes
Depth-of-field	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with
Depth-of-field preview button Reflex mirror	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position
Depth-of-field preview button	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac-
Depth-of-field preview button Reflex mirror	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso-
Depth-of-field preview button Reflex mirror Remote terminal	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers
Depth-of-field preview button Reflex mirror	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact;
Depth-of-field preview button Reflex mirror Remote terminal	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and
Depth-of-field preview button Reflex mirror Remote terminal	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi-
Depth-of-field preview button Reflex mirror Remote terminal	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash synchronization	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain sync possible
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash synchronization Synchronization	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain sync possible 1/250 s to 1/60 s. in
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash synchronization	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain sync possible 1/250 s to 1/60 s. in programmed auto or aperture-
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash synchronization Synchronization	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain sync possible 1/250 s to 1/60 s. in programmed auto or aperture- priority auto; 1/250 s to 30 s
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash synchronization Synchronization	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain sync possible 1/250 s to 1/60 s. in programmed auto or aperture- priority auto; 1/250 s to 30 s in slow sync; 1/250 s to 30 s
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash synchronization Synchronization	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain sync possible 1/250 s to 1/60 s. in programmed auto or aperture- priority auto; 1/250 s to 30 s in slow sync; 1/250 s to 30 s in shutter-priority auto or
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash synchronization Synchronization	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain sync possible 1/250 s to 1/60 s. in programmed auto or aperture- priority auto; 1/250 s to 30 s in slow sync; 1/250 s to 30 s in shutter-priority auto or manual exposure mode
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash synchronization Synchronization	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain sync possible 1/250 s to 1/60 s. in programmed auto or aperture- priority auto; 1/250 s to 30 s in shutter-priority auto or manual exposure mode (shorter set times automati-
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash synchronization Synchronization	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain sync possible 1/250 s to 1/60 s. in programmed auto or aperture- priority auto; 1/250 s to 30 s in shutter-priority auto or manual exposure mode (shorter set times automati- cally switch back to 1/250 s);
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash synchronization Synchronization	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain sync possible 1/250 s to 1/60 s. in programmed auto or aperture- priority auto; 1/250 s to 30 s in slow sync; times automati- cally switch back to 1/250 s); TTL high-speed sync at
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash synchronization Synchronization	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain sync possible 1/250 s to 1/60 s. in programmed auto or aperture- priority auto; 1/250 s to 30 s in slow sync; 1/250 s to 30 s in shutter-priority auto or manual exposure mode (shorter set times automati- cally switch back to 1/250 s); TTL high-speed sync at 1/300 s using custom mode;
Depth-of-field preview button Reflex mirror Remote terminal Accessory shoe Flash synchronization Synchronization	battery unit) or manual rewind; stops automatically when film is rewound electronically controlled; 10 s duration; blinking LED indicates self-timer operation; cancellable stops lens down to the aperture set in all expo- sure modes instant-return type; with lockup position 10-pin remote terminal ac- cepts remote control accesso- ries and personal computers with ISO middle contact; contacts for TTL, monitor and ready-light as well as Posi- Mount locking system with SB-25/26/27 slow sync and rear-curtain sync possible 1/250 s to 1/60 s. in programmed auto or aperture- priority auto; 1/250 s to 30 s in slow sync; 1/250 s to 30 s in slow sync; 1/250 s to 30 s in slow sync; times automati- cally switch back to 1/250 s); TTL high-speed sync at





TTL Multi-Sensor Pre-flashes	five-segment sensor for TTL auto flash control available for all Nikon flash units with ISO flash shoe in connection with AF-Nikkor lenses Nikon Flash Units SB- 25/26/27 in connection with an AF-Nikkor fire pre-flashes for evaluation by the TTL Multi-Sensor
3D Multi-Sensor fill flashes	takes distance information from AF-D/AF-I/AF-S Nikkor lenses into account when using a SB-25/26/27 Flash Unit
Flash ready light	shows when attached Nikon flash unit is ready; blinks to warn of insufficient light for correct exposure
Custom settings	Nikon F5 factory settings may be adapted for special requirements
Connection to PC	Nikon software links your camera to a PC running Win- dows 95 <sup>®</sup> or a Macintosh <sup>®</sup> to allow setting of various F5 operations and downloading of shooting data
Camera back	may be exchanged for Nikon MF-27 Data Display Back or MF-28 Multi-Control Back
Power source	eight 1.5 volt batteries type LR6/AM3 or, as an accessory, Ni-MH Battery Unit MN-30
Battery life	approx. 90 rolls of 36-expo- sure film using alkaline batte- ries or approx. 250 rolls using lithium batteries; approx. 100 rolls using the Battery Unit (at 20 °C and AF mode)
Dimensions	$158 \times 149 \times 79 \text{ mm}$ (W × H × D)
Weight	$(W \times H \times D)$ 1210 g (without batteries)

Supplied with: Multi-Meter Finder DP-30 Body Cap BF-1A Carry strap

#### Accessories: Action Finder DA-30 6 × High Magnification Finder DW-31 Waist-Level Finder DW-30 Data Display Back MF-27 Multi-Control Back MF-28 12 different focusing screens Ni-MH Battery Unit MN-30 Ni-MH Charger MH-30 TTL Cable SC-24 (for finder DW-31/30) Rubber Eyecup DK-2 Remote Control Cord MC-20/30 Extension Cable MC-21 Connecting Cord MC-23 (simultaneous activation) Adapter Cord MC-25 Infrared Remote Control ML-3

Nikon Photo Manager F5 software for Windows 95® or Macintosh® MC-33/MC-34 connecting cord required



## Nikon F100

Order code	FAA350NA
Camera type	Integral-motor autofocus 35 mm single-lens reflex with
	electronically controlled focal-
Picture format	plane shutter 24 mm $\times$ 36 mm
Lens mount	Nikon F mount (with AF
1	coupling, AF contacts)
Lenses	D-type AF Nikkor: all functions possible; A Nikkor other than
	D-type: all functions except 3D
	matrix metering possible; M-P Nikkor: all functions except 3D
	matrix metering and autofocus
	possible; lenses without CPU: in A and M with centre-weight-
	ed or spot metering possible.
	Electronic range finder usable
Focusing	up to aperture f/5.6 Auto and manual focusing with
locusing	electronic range finder
AF modes	Single servo AF (S) with focus
	priority: shutter release only possible if focus indicator ap-
	pears in viewfinder
	Continuous servo AF (C): shut- ter release possible anytime
	(release priority); 0 appears in
	viewfinder when focus is not locked. With a moving subject,
	the camera continuously
	focuses on subject as long as
	the shutter release button is kept lightly pressed
	Manual focus (M); shutter
	release possible anytime; 0 appears in viewfinder when
	focusing
AF metering area	TTL phase detection, Nikon Multi-CAM 1300 autofocus
	module; detection range: EV 1
	to EV 19 (ISO 100/21°, at nor-
AF start button	mal temperature) By pressing [AF-on] AF start
	button AF focusing is activated;
	by pressing [CSM] button [AF on] can be reprogrammed (fo-
	cusing without pressing shutter
	release button)
	AF metering area modes: single area AF: only one of the
	five metering areas is active
	Dynamic AF: the primary sensor area is designated (the first to
	detect the subject), then if the
	detected subject moves, dyna- mic AF automatically shifts to
	the next sensor that detects
	the subject, then the next again, shifting among the
	progression of sensors as the
	subject moves.
	Dynamic AF mode with closest- subject priority
Focus lock	By lightly pressing shutter re-
	lease button in single servo AF or by pressing [AF-L/AE-L]
	button in continuous servo AF
Viewfinder	Fixed eye-level pentaprism, with dioptre adjustment
	$(-3 \text{ to } +1 \text{ m}^{-1})$
Dioptre adjustment	$(-3 \text{ to } +1 \text{ m}^{-1})$
Eyepoint Viewfinder coverage	21 mm (at –1 m <sup>-1</sup> ) Approx. 96%: magnification
5	approx. 0.76×
	with 50 mm lens set to infinity $(at 1 m^{-1})$





Focusing screen	B-type BriteView clear matte
	screen III, interchangeable with optional E-type screen with grid
Viewfinder information	Focus indications, metering
information	system, shutter speed lock, AE lock, shutter speed, aperture
	lock, aperture, exposure mode, electronic analogue exposure
	display, exposure compensa-
	tion, frame counter/exposure compensation value, ready-
	light, five sets of focus brackets
LCD panel	(area) Film speed, DX indication; shut-
	ter speed; shutter speed lock;
	aperture lock; aperture; expo- sure compensation; auto expo-
	sure/flash exposure bracketing;
	electronic analogue exposure display; custom settings; expo-
	sure mode; flexible program; flash mode; AF area mode; bat-
	tery power; frame counter
Exposure metering system	TTL full-aperture exposure me- tering system; three metering
increasing system	systems selectable (limitations
	depending on lens used): 3D matrix metering [v]:
	10-segment sensor meters light
	available; with D-type AF Nik- kor, 3D matrix metering is auto-
	matic, brightness, contrast and subject distance information
	are used to ensure accurate
	exposure Centre-weighted metering
	75% of the meter's sensitivity
	is concentrated on the 12 mm dia. circle
	Spot metering Exposure is metered in a 4 mm
	dia. circle (approx. 2 % of en-
	tire frame). With the use of CPU Nikkor all five auto metering
	areas can be used for spot
Exposure modes	metering. [P] programmed auto:
	camera automatically sets shutter and aperture
	[S] Shutter-priority auto:
	camera automatically sets aperture according to selected
	shutter speed.
	[A] Aperture-priority auto: camera automatically sets
	shutter speed according to aperture
	[M] manual setting: aperture
	and shutter speed can be set manually
Metering range	3D matrix metering: EV 0–21;
	centre-weighted metering: EV 0–21
	spot metering: EV 3–21 (at normal temperature
	ISO 100/21°, 50 mm lens f/1.4)
Exposure meter coupling	CPU and M
Auto exposure lock	Detected exposure value locked
Auto exposure/flash	by pressing [AF-L/AE-L] button Two or three shots; compensa-
exposure bracketing Exposure	
compensation	EXposure compensated in $\pm 5$ EV range, in 1/3 steps



Depth-of-field preview button	In all modes possible by press- ing depth-of-field preview but- ton
Film speed setting	DX or manual selectable (manual setting effective over DX detected film speed); film speed range DX: ISO 25/15° to 5000/38°; manual: ISO 6/9° to
	6400/39° in 1/3 steps
Shutter	Electronically controlled, verti- cal-travel focal-plane shutter
Shutter speeds	In P, A: 30 to 1/8000 sec.; in S: 30 to 1/8000 sec. (in 1/3 steps); in M: 30 to 1/8000 sec. (in 1/3
Sync contact	steps), bulb X contact only; flash sync speed up to 1/250 sec.
Flash control	Controlled by five-segment TTL sensor:
	3D multi-sensor balanced fill- flash compatible with SB-25/ 26/27/28DX/50DX and D-type AF-Nikkor Multi-sensor balanced fill-flash with SB-25/26/27/28/28DX/ 50DX and other than D-type AF Nikkor
	Centre weighted fill-flash with SB28DX/28/25/26/25/24/23/22/ 22/20 and non-CPU lenses with centre-weighted metering
Film speed range	with TTL auto flash: ISO 25/15° to 1000/31°
Flash modes	Front-curtain sync (normal sync); red-eye reduction with slow sync; slow sync; rear-cur-
Flash-ready light	tain sync Lights up when flash (SB-28,
Accessory shoe	27, 26, 23, etc.) is ready to fire; blinks for 3 sec. after exposure for full output warning ISO type hot shoe contact with middle contact (sync contact, ready-light contact, TTL con- tact, LCD panel contact) and
Flash cord terminal	safety lock Standard terminal with screw
Self-timer	cap Electronically controlled; timer
Depth-of-field	duration: 10 sec. Control of depth of focus on
preview button	matte screen
Film advance	Automatic with built-in motor; S, C, Cs selectable
Film advance speed	S: one frame advance (with continuous AF, manual expo- sure mode, shutter speed 1/250 sec. or faster, 36-exposure film) C: continuous shooting; ap- prox. 4.5 fps (AA-type alkaline batteries); approx. 5 fps (with multi-power high speed battery pack MB-15)
Film rewind	Cs: Continuous low-noise, low- speed shooting; approx. 3 fps (AA-type alkaline batteries); approx. 3 fps (with multi- power high speed battery pack MB-15) Automatic rewind with built-in motor (activated by pressing two film rewind buttons); rewind speed with 36-exposure film: C - approx. 9 sec., Cs - ap- prox. 19 sec. (AA-type alkaline batteries)



Multiple exposure	Activated with film advance
	mode dial
Frame counter	Additive-type; count-down type with film rewind
Camera back	Removable: AF area and modes
cumera back	can be selected; interchange-
	able with data back MF-29
Remote control socket	10-pin socket for data transfer,
	electr. release, etc.
Power switch	With positions ON, OFF and [*]
	for LCD lighting
Custom settings	22 different custom settings
	(see instruction manual)
Connection to PC	Nikon Software allows connec-
	tion to a PC Windows 95 <sup>®</sup> or
	Macintosh <sup>®</sup> ; with this several
	Nikon F100 functions can be
	set and picture files can be
	down-loaded.
Power source	Standard battery holder MS-12
	for four alkaline or lithium bat-
	teries; as optional accessory 3 V
	lithium battery holder MS-13
	for two CR123A or DI 123A
	batteries; as optional accessory
	multi-power high speed battery
	pack MB-15 (for separate
	Ni-MH battery holder MN-15)
	and battery holder MS-15 for
	six alkaline or lithium batteries)
Trinod codest	1/4 inch (JIS)
Tripod socket Dimensions	
Dimensions	Approx. $155 \times 113 \times 66 \text{ mm}$
Mr. 1	$(W \times H \times D)$
Weight	Approx. 785 g



Supplied with:

Body cap BF-1A Neck strap

## Accessories:

Data back MF-29 3 V lithium battery holder MS-13 Battery holder for multi-power high speed battery back MB-15 Ni-MH battery pack MN-15 Quick charger MH-15 E-type focusing screen AC-2WE Photo Secretary II for F100 (for Windows®) Ever-ready case CF-57/58

## Battery holder MB-15

Order code Use	FAW04501 Ergonomic handling, as well as comfortable handling for shoot- ing of vertical-format pictures due to alternative shutter re- lease button; AF start button and setting dial for custom set- ting of shutter and aperture
Usable	With Nikon F100
Power source	Six alkaline batteries LR-6 or lithium batteries FR-6 or Ni-MH battery pack MN-15
Shooting frequency	5 frames/sec.
Dimensions	156,5 × 97,5 × 69 mm
Weight	Approx. 305 g



## Nikon F90X

Order code Type of camera	FAA280NC integral-motor; electronic autofocus reflex camera
Picture format Lens mount Lenses	24 × 36 mm Nikon F bayonet mount all Nikkor AF-D lenses and – with limitation – all Nikon AF and conventional Nikkor lenses
Focusing modes	autofocus and manual focusing
Autofocus settings	with electronic focusing aid single servo autofocus with focus priority shutter can be released only when automatic focus is correctly set, continuous servo autofocus with release priority; shutter can be released at any time and focus is con- tinuously set; for moving sub- jects regardless of autofocus setting, focus tracking in auto- matically activated
Autofocus area	wide and sport; selectable; Nikon CAM 246 cross-type autofocus sensor module
Autofocus detection range	EV-1 to EV 19 (ISO 100)
Autofocus lock	by means of shutter in single autofocus (S) mode; by means of
Viewfinder	AF-L lever in continuous setting fixed pentaprism high-eyepoint viewfinder; viewfinder field
Viewfinder	approx. 92 % autofocus area, focus indica-
information	tions, exposure setting, shutter
	speed, aperture, electronic ana- log display, frame counter/ ex- posure compensation value/ variprogram and exposure compensation symbol (LCD, flexible program mark, flash recommended and flash-readi- ness LED, viewfinder display may be illuminated
Focusing screen	Nikon type B BriteView screen, interchangeable with E-type screen
External panel	shutter speed, aperture, expo- sure mode, exposure metering system, focus area, manual fo- cus mark, autofocus mark with focus-/release-priority indication, flexible program mark, flash sync, film speed, DX mark, expo- sure compensation mark, frame counter/vari-program/exposure compensation value, custom mark, film advance mode, film loading, film rewind, self-timer and battery check; external panel may be illuminated
Exposure metering system	eight-segment matrix metering for all operation settings as well as center-weighted (75%/25%) and spot metering; matrix metering evaluates each scene for brightness and con- trast and determines the best exposure method for that sub- ject; with Nikkor AF-D lenses, distance information is also taken into account
Esposure settings	programmed auto (multi-pro- gram and vari-program), shutter- priority auto, aperture-priority auto and manual Multi-programmed auto: shutter speed and aperture automati- cally adjusted, taking account of





	lens focal length; combination
	of shutter speed and aperture
	may be changed (flexible pro- gram) using dial in increments
	of 1/3 EV for shutter speed
	Shutter-priority auto: shutter
	speed automatically adjusted
	depending on preselected
	aperture
	Aperture-priority auto: aperture automatically adjust-
	ed depending on preselected
	shutter speed
	Manual: aperture and shutter
	speed adjusted manually
	Vari-program: seven integrated vari-programs: portraits, por-
	traits with red-eye reduction,
	hyperfocal, landscape, silhou-
	ette, sport and close-up
Metering range	matrix and center-weighted metering: EV –1 to EV 21 (with
	ISO 100 at f/1.4 aperture);
	spot metering: EV 3 to EV 2
	(ISO 100)
Auto exposure lock	possible with AE lock lever
Exposure	E EV in 1/2 increments
compensation Depth of field	± 5 EV in 1/3 increments can be previewed in aperture
preview button	priority auto or manual mode
Film speed range	automatic for DX-coded films
	(ISO 25–5000), manual adjust-
	ment for films without DX coding (ISO 6–6400)
Shutter	electromagnetically controlled
Shutter	vertical-travel focal-plane
	shutter
Shutter speed	automatic infinitely speed
	adjustment from 1/8000 to 30 sec in programmed auto
	and aperture priority; in 1/3 EV
	steps in shutter priority and
	manual setting; electromagne-
	tically controlled long exposure
Film loading	in B setting automatic loading control
and advance	system and film advance to
	frame number 1 settings:
	single frame
	continuous low with
	2 frames/sec continuous high with
	4,3 frames/sec
Frame counter	additive type; reverse count-
	during film rewind
Film rewind	automatic when rewind button
Self timer	pressed; automatic rewind stop electronic self-timer with
Sen aner	variable duration between
	2 and 30 sec; cancelable
Terminal	10-pole socket for remote
	activation accessories and electronic organizer
Accessory shoe	standard ISO hot-shoe contact;
·····, ····	contacts for flash-readiness
	light, TTL and monitor,
rta da anna a contra l	posi-mount system
Flash sync control	slow sync, rear-curtain sync control and red-eye reduction
	functions built-in
Flash	variable flash sync control
synchronisation	from 1/60 to 1/250 sec in pro-
	grammed auto and aperture
	priority auto; slow sync and rear-curtain sync from 1/250 to
	30 sec; returns automatically to
	1/250 sec in shutter priority
	auto and manual setting





TTL multi-sensor	when shorter speeds set; FP high speed sync with speed- light SB-28/26 allows high shutter speeds from 1/250 to 1/4000 sec, in manual mode five-zone sensor for TTL auto- flash control; available with all Nikon flash units with standard ISO-typ shoe and with Nikkor AF AI-P or AF-D lenses
Monitor pre-flash	Nikon speedlight SB-27/28
	initiates multiple test flashes
	to detect the scene's special features
3D-multi-sensor	takes distance information from
fill-flashes	a Nikkor AF-D into account
III-IId3iie3	when using SB-25/26 flash unit
Power source	four 1.5V batteries type
Tower source	I R6/AM3 or NiCd accus
Battery life	at 20°; approx. 50 rolls of 36-
buttery me	exposure film (battery power
	check provided)
Camera back	may be exchanged for MF-25
	World Time data back or MF-26
	multi-control back
Dimensions	$154 \times 106 \times 69 \text{ mm}$
	$(W \times H \times D)$
Weight	755 g (without batteries)
weight	755 g (without batteries)

## Supplied with:

Body cap BF-1A Strap

#### Accessories:

World Time Data back MF-25 Multi-control back MF-26 Multi-power grip MB-10 Eyepiece DK-6 Focusing screen type E Remote control cord MC-20 Extension cable (10-pole) MC-21 Remote cord MC-22 Adapter cord MC-25 (to connect conventional) Remote-control accessories) External battery unit DB-6 Cordless remote control ML-3 Connecting cord MC-23 (simultaneous activation of two cameras) Electronic Organizer connecting cord MC-27 AC-2E IC Electronic Organizer card

# Multi-Power Grip MB-10

Order code Function	FAW03701 the ergonomic design means more comfortable holding and provides an alternative shutter release button for shooting vertical-format pictures
Use	with Nikon F90X and F90 (the vertical release button works only with Nikon F90X)
Power source	four 1.5 V batteries type LR6/AM-3 or with accessory Battery holder MS-11 two 3 V lithium CR123A batteries
Dimensions	$154 \times 100 \times 60 \text{ mm}$ (W × H × D)
Weight	215 g (without batteries)



# Nikon F80

Order code	FAA360NA black
Type of camera	FAA360AA silver Integral-motor autofocus
	35 mm single-lens reflex with
	electronically controlled focal- plane shutter and built-in
	speedlight
Picture format	$24 \times 36$ mm (standard 35 mm
Lens mount	film format) Nikon F mount (with AF coup-
	ling, AF contacts)
Lens	The following lenses can be used: all AF-S, AF-I and AF-D
	Nikkor and – with limitations –
	all Nikkor AF and conventional
	Nikkor lenses; electronic range- finder usable with lens with
	maximum aperture of f/5.6 or
	faster
Viewfinder	Fixed eye-level pentaprism with built-in dioptre adjust-
	ment ( $-1.8$ to $+0.8$ dpt)
Eyepoint	17 mm (at –1.0 dpt)
Focusing screen	Clear matte screen II with the
	possibility to display focus brackets and on-demand grid
	lines
Viewfinder frame	A
coverage Finder magnification	Approx. 92 % Approx. 0.71 $\times$ to 0.75 $\times$ with
-	50 mm lens set to infinity
Viewfinder	Focus indication; metering
information	system; AF lock; shutter speed; aperture; exposure mode; elec-
	tronic analogue exposure dis-
	play/exposure compensation
	display; exposure compensa- tion; frame counter/exposure
	compensation value; five sets
	of focus brackets (area); 12 mm
	dia. reference circle for centre- weighted metering
Reflex mirror	Automatic, instant-return type
Lens aperture	Instant-return type, with depth-
Autofocus	of-field preview button TTL-phase detection, Nikon
	Multi-CAM900 autofocus mo-
	dule; detection range EV –1 to EV 19 (ISO 100/21°, at normal
	temperature)
Lens servo	Single servo AF (S); continuous
	servo AF (C); manual focus (M); focus tracking automatically
	activated with moving objects,
	in single servo AF (S) as well as
Focus area	in continuous servo AF (C) One of five focus areas can be
locus alcu	selected
AF area modes	Single area AF; dynamic AF;
	and dynamic AF mode with closest subject priority
Focus lock	Focus is locked by pressing
	AE-L/AF-L button or by lightly
	pressing shutter release button in single servo AF
Metering system	TTL full-aperture exposure me-
	tering system; three metering
	systems selectable (limitations depending on lens used)
	3-D matrix metering; centre-
	weighted metering: approx.
	75 % of the meter's sensitivity concentrated on the 12 mm
	dia. circle in the centre of the
	viewfinder Spot metering: 4 mm dia. circle
	(approx. 1 % of entire frame)





Metering range	3-D matrix metering: EV 0–21
	Centre-weighted metering:
	EV 0–21;
	Spot metering: EV 3–21 (at normal temperature, ISO
_	100/21°, 50 mm f/1.4 lens)
Exposure compensation	Exposure compensated in ±3 EV range, in 1/2 steps
Auto exposure	With AE-L/AF-L button; number
bracketing	of shots: two or three; compen- sation steps: 1/2
Film speed setting	DX or manual selectable
Film speed range	DX: ISO 25/15° to 5000/38°;
	manual: ISO 6/9° to 6400/39° in 1/3 steps
Shutter	Electronically controlled verti-
Shutter speeds	cal-travel focal-plane shutter In P, A: 30 to 1/4000 sec.;
	in S: 30 to 1/4000 sec.
	(in 1/2 steps); in M: 30 to 1/4000 sec.
	(in 1/2 steps); B
Sync contact	X-contact only; flash synchroni- sation up to 1/125 sec.
Built-in speedlight	Activated by pressing speed-
1 5	light lock-release button, guide
	number: 12 (at ISO 100/21°); flash coverage sufficient for
	28 mm lens; film speed range:
Flash control	ISO 25/15° to ISO 800/30° Controlled by five-segment TTL
	multi-sensor automatic bal-
	anced fill-flash with TTL multi- sensor: 3-D multi-sensor bal-
	anced fill flash compatible
	with built-in speedlight SB-28,
	27, 26, 25 and D-type AF Nik- kor lens; multi-sensor balanced
	fill-flash with built-in speed-
	light or external speedlights SB-29, 28, 27, 26, 25, 24, 23,
	22s, 22, 20 and manual control
Flash sync mode	or spot metering Front-curtain sync (normal
Flash sync mode	sync), red-eye reduction, red-
	eye reduction with slow sync,
Ready light	slow sync, rear-curtain sync Lights up when built-in flash
	is fully charged (SB-28, SB-27,
	SB-26, SB-23, etc.); blinks (3 sec.), after flash for full
	output warning
Accessory shoe	Standard ISO-type hot-shoe contact as well as sync and
	control contacts; safety lock
Self-timer	provided Electronically controlled; timer
Sen-uner	duration: 10 sec.
Depth-of-field	Stop-down lens aperture by
preview button	pressing depth-of-field preview button
Film loading	Film automatically advances to
	first frame when camera back is closed (shutter and reflex
	mirror not activated)
Film advance	Automatic advance with built- in motor; single or continuous
	servo AF (S or C) selectable
Film advance speed	With continuous servo AF (C)
	and manual exposure mode, shutter speed 1/250 sec., or
	faster (imprint data between
	film frames not selected); 36-exposure film, approx.
	2.5 fps (3V lithium batteries)



Film rewind	Automatic rewind with built-in
	motor; rewind speed with 36-
	exposure film and 3V lithium
	batteries: approx. 23 sec.
Multiple exposure	Activated using film advance
	mode dial
LCD panel	film speed, DX indication, shut-
information	ter speed, exposure compensa-
(illuminator built-in)	tion value, aperture, exposure
	compensation, flash exposure
	compensation, auto exposure
	bracketing, bracketing bar
	graphs, custom, flexible pro-
	gram, flash sync mode, AF area
	mode, focus area, battery power,
	frame counter
Camera back	Hinged back with film confir-
	mation window; AF area mode
	selector, focus area selector
Power source	Two CRI23A or DL123A lithium
	batteries; optional battery pack
	MB-16 is also available (for
	four AA-type alkaline, alkaline-
	manganese, lithium, NiCd or
	NiMH batteries)
Power switch	Power ON and OFF position;
	auto switch-off 6 sec. after
	power turned on if no opera-
Dettem: newser	tions are performed
Battery power confirmation	Shown in LCD panel, with
	exposure meter on With two 3 V lithium batteries:
Battery capacity	approx. 40 films (at 20°);
	or 36 films (at –10°)
Custom sotting	19 (F80SBD) or 18 (F80/F80D);
Custom setting	see instruction manual
Reset	Various settings can be reset to
neset	their original default settings
	(with some exceptions)
Dimensions	F80: approx.
$(W \times H \times D)$	$141.5 \times 98.5 \times 71$ mm;
	F80D: approx.
	$141.5 \times 98.5 \times 71.5$ mm;
	F80S: approx.
	141.5 $\times$ 98.5 $\times$ 73.5 mm
Weight	F80: approx. 515 g
(without batteries)	F80D: approx. 520 g
(without batteries)	F80S: approx. 525 g
	1005. appion. 325 g

Accessories: Battery pack MB-16 Softcase CF-59/60

## Caution

Infrared film cannot be used with this camera, because the F80 detects the film perforation with an infrared ray.



## Nikon F80 Data

Technical data the same as with Nikon F80, but with additional data back with LCD data panel and buttons

Order code	FAA362NA black FAA362AA silver
Imprint function	Year/month/day, day/hour/ minute, no imprint; month/day/year and day/month/year
Accuracy	Built-in clock: 24-hour type with timing accuracy within $\pm$ 90 seconds a month; leap year adjustment until 2049
Usable film	ISO 32/16° to 3200/36° DX-coded film

#### Accessories: Battery pack MB-16

Softcase CF-59/60

#### Caution

Infrared film cannot be used with this camera, because the F80 detects the film perforation with an infrared ray.



Technical data the same as with Nikon F80S, but with additional data imprint between film frames

Order code	FAA364NA black
Imprint function	Selected/cancelled with shoot-
	ing data imprint dial; imprinted
	data: shutter speed, aperture
	and exposure compensation
	value
Place of imprint	Between film frames

# Accessories:

Battery pack MB-16 Softcase CF-59/60

#### Caution

Infrared film cannot be used with this camera, because the F80 detects the film perforation with an infrared ray.

# Battery pack MB-16 for Nikon F80

Order code Use	FAW05301 Increases the number of shots per set of batteries, for more consistent performance even at low temperatures
Power source	Four 1.5 V batteries LR6/AM3 or with optional MS-16 for two 3V lithium batteries
Dimensions	Approx. $140 \times 89 \times 59 \text{ mm}$ (W × H × D)
Weight	105 g







# Nikon F65

Order code	FAA370NA black
Comoro trino	FAA370AA silver
Camera type	Integral-motor autofocus 35 mm single-lens reflex with
	electronically controlled focal-
	plane shutter and built-in speedlight
Picture format	$24 \times 36$ mm (standard
Lens mount	35 mm film format) Nikon F mount (with AF coup-
	ling and AF contacts)
Suitable lenses	AF Nikkor, and AI-P and G-Nik- kor lenses (except AF Nikkor for
	F3AF and IX-Nikkor)
Viewfinder	Fixed eye-level pentaprism, built-in dioptre adjustment
	(-1.5 to +0.8 dpt)
Eyepoint Focusing screen	17 mm (at -1 dpt) B-type clear matte screen V
-	with focus brackets
Viewfinder frame coverage	Approx. 89 %
	Approx. $0.68 \times$ to $0.60 \times$ with
	50 mm lens set to infinity (at
Viewfinder	<ul> <li>-1.5 to +0.8 dpt)</li> <li>Focus indications; focus area;</li> </ul>
information	shutter speed; aperture; elec-
	tronic analogue exposure dis- play/exposure compensation
	value display; exposure com-
	pensation; frame counter/expo- sure compensation value; rea-
	dy-light / flash recommended /
	full flash output; five sets of fo- cus brackets (area); 12 mm dia.
	reference circle for centre-
	weighted metering.
Reflex mirror Lens aperture	Automatic, instant-return type Instant-return type; with depth-
	of-field preview button
Autofocus	TTL phase detection, Nikon Multi-Cam 900 autofocus mo-
	dule with AF-assist illuminator
Detection range	(approx. 0.5 m–3 m) EV –1 to EV 19 (ISO 100/21° at
Detection range	normal temperature)
Lens servo	AF: Auto-Servo AF: camera automatically selects
	single servo AF or continuous
	servo AF operation, according to the subject status (static or
	moving),
	Single servo AF: focus is locked
	when the subject is in focus Continuous servo AF: automa-
	tic focus tracking with extrapo- lation
	M: manual focus
Focus area	One of five can be selected
Focus area mode	Dynamic AF mode with closest- subject priority
Dynamic AF mode	Single area mode with M
Metering system	(manual focus) Full-aperture exposure meter-
	ing system; three metering
	systems selectable (limitations depending on lens used)
	3D six-segment matrix meter-
	ing with G- or D-type AF Nikkor
	Six-segment matrix metering
	with AF Nikkor other that G-
	or D-type (except AF Nikkor for F3AF and IX-Nikkor), AI-P
	Nikkor
	Centre-weighted metering: automatically selected with
	manual exposure mode





Metering range	3D matrix metering: EV 1–20; centre-weighted metering: EV 1–20 (at normal tempera-
Exposure modes	ture, ISO 100/21° and f/1.4 lens) Fully automatic Vari-program: portraits, lands-
	capes, close-ups, sports, night programme
	programmed auto (with flexible program)
	shutter-priority auto aperture-priority auto
Exposure	manual balance Exposure compensated in
compensation	±2 EV range, in 1/2 steps (except in M and A)
Auto exposure	Bracketing range: ±2 EV;
bracketing	three shots; bracketing steps: 0.5, 1, 1.5 or 2 EV
Film speed setting	Automatically set to DX-coded film (manual not selectable)
Film speed range	DX: ISO 25/15° to 5000/38°, automatically set to ISO
	100/21° with non-DX-coded film
Shutter	Electronically controlled verti-
Shutter speeds	cal-travel focal-plane shutter In Vari-program, P, A: automati-
	cally set between 30 to 1/2000 sec. (in 1/2 steps)
	in S: 30 to1/2000 sec. (in 1/2 steps)
	in M: 20 to 1/2000 sec (in 1/2 steps), time
Flash sync contact	X-contact only; flash synchroni- sation up to 1/90 sec.
Built-in speedlight	In Vari-program: automatically
	activated In P, S, A, M: activated by press-
Guide number	ing flash lock-release button 12 (at ISO 100/21°); flash
	coverage: sufficient for 28 mm lens; film speed range:
Flash control	ISO 25/15° to ISO 800/30° Controlled by TTL sensor
	matrix balanced fill-flash: built-
	in speedlight or external speed- light and CPU Nikkor lens (ex-
	cept in manual exposure mode M)
	Standard TTL automatic flash: in M (and with lens without
Flash modes	CPU) Front-curtain sync (normal
	sync); slow sync; rear-curtain sync; red-eye reduction; red-eye
	reduction with slow sync; flash
Flash-ready light	cancel Flash fully charged: lights up in
	green; full output warning: blinks in green
Accessory shoe	Standard ISO-type hot shoe contact and middle contact
Self-timer	with safety lock Electronically controlled:
	timer duration 10 sec; can be switched off
Depth-of-field	Electronically controlled; con-
preview button	trol of depth of focus on matte screen
Film loading	Film automatically advances to first frame when camera back
Film advance	is closed Automatic advance with built-
	in motor; continuous shooting possible with sports continuous
	mode (built-in speedlight can-
	not be used); film advance speed: approx. 2.5 fps (with
	fresh batteries)





Film rewind Multiple exposure LCD panel	Automatic rewind at the end of film roll with built-in motor; rewind speed with fresh batteries: approx. 16 sec. with 36-exposure film Selectable in P, S, A and M Shutter speed, aperture, expo-
information	sure compensation, exposure compensation value, auto ex- posure bracketing, multiple ex- posure, flash sync mode, focus area, battery power, frame counter, self-timer, remote control
Camera back	Hinged back with film confir- mation window
Power source	Two 3 V CR2 lithium batteries
Power switch	Power ON and OFF position
Power switch off	Automatic switch-off 5 sec. after last use
Battery power	In LCD panel, with exposure
confirmation	meter ON
Battery life	(with two 3 V lithium batteries) at 20° C approx. 50 films of 36 exposures at -10 °C approx. 25 films without flash
Dimensions	F65: approx.
$(W \times H \times D)$	$139.5 \times 92.5 \times 65.6$ mm F65D: approx. 139.5 $\times$ 92.5 $\times$ 68 mm
Weight	F65: approx. 395 g (without batteries) F65D: approx. 400 g (without batteries)

## Nikon F65 Data

The same technical data as Nikon F65, however with additional data back with LCD data panel and buttons.

Order code	FAA372NB FAA372AB
Imprinted data	Year/month/day; day/hour/mi- nute; no imprint; month/day/year and day/month/year
Timing accuracy	Built-in 24 hour clock with ±90 sec. per month; automatic leap-year adjustment up to the year 2049
Film speed range	ISO 32/16° to 3200/36° with DX coding

Accessories: Ever-ready case CF-61 Infrared remote control ML-L3 Battery holder MB-17



# Nikon F3/F3 HP/F3 Ti

Order code	<b>F3</b> /FAA120NA
order code	F3HP/FAA121NA
	Same model as F3 but with high-eyepoint finder DE-3
	F3TIB black/FAA122NA
	F3 with high-eyepoint finder DE-4 in robust titanium model
Type of camera	Electronically controlled
Distance formant	reflexcamera 24 × 36 mm
Picture format Lenses	All not AF Nikkor (AI) and AF
cl	Nikkor lenses
Shutter	Horizontal-travel titanium foil focal-plane shutter
Shutter release	Electromagnetic. Switches me-
	ter on when depressed halfway (after shutter release lock is re-
	leased); meter then remains on
	for 16 sec after finger is taken off the shutter release button.
	Threaded to accept standard
Backup mechanical	cable release Mechanical 1/60 sec exposure
release lever	time, regardless of the expo-
	sure setting (except for T). Used when there is little or no
	battery power
Automatic exposure control	Aperture-priority automatic exposure control with stepless
control	shutter speeds from 8 sec to
Manual exposure	1/2000 sec Quartz digital control for
control	16 shutter speeds from 8 sec
	to 1/2000 sec including X (1/80
Mechanical shutter	sec); B and T also provided Possible at T setting on shutter
control	speed dial, or at 1/60 sec when
	using backup mechanical release lever
Viewfinder	Eyelevel finder DE-2 as stand-
	ard; interchangeable with other viewfinders. $0.8 \times$ magnifica-
	tion with 50 mm lens. 100%
Eyepiece cover	coverage Provided. Prevents scattered
<i>,</i> ,	light from entering the finder
Focusing screen	eyepiece Type K as standard. 19 other
-	types as accessories
Exposure metering	TTL metering. Silicon photo- diode and metering circuits in-
	corporated into camera body.
	Meter works with all inter- changeable viewfinders
Metering range	EV 1 to EV 18 (e.g. f/1.4 at
	1 sec to f/11 at 1/2000 sec with 50 mm f/1.4 lens and ASA 100
	film)
Film speed setting Accessory shoe	ASA/ISO 12 to 6400 Provided. Special Nikon type
<b>,</b>	located at base of rewind knob.
	Accepts flash unit SB-17 or cord SC-12 (for TTL control of
	flash unit SB-11/14). Two flash
	adapters available: for flash units with ISO hot shoe con-
	tacts and for flash unit for
	Nikon F2





Flash synchronization	All speeds up to 1/80 sec with electronic flash; with SB-17 flash unit, the sync speed is au- tomatically set to 1/80 sec at A (automatic operation) or at
Viewfinder display	1/125 sec or above. Synchroni- zation is also possible at slower speeds. Threaded sync terminal provided for off-camera and multiple-flash photography Liquid crystal display shows
	shutter speed; on Auto, +2000 indicates overexposure and -8 indicates underexpo- sure; on Manual, M appears with + indicating overexpo- sure, - indicating underexposu- re or-and + simultaneously in-
	dicating correct exposure. LED ready light glows when flash units SB 11/14/16A/17/21A are ready. The aperture in use is also shown in the viewfinder
Viewfinder	Provided. Illuminates both
illuminator	LCD and ADR
Exposure	Provided. From $+2$ to $-2$ in
compensation	one-third increments
Exposure memory	Possible
Multiple exposure	Possible
Self timer	Quartz-controlled 10 sec
Jen unier	delayed exposure. LED blinks
	at 2 Hz for the first 8 sec and
	at 8 Hz for the last 2 sec
Reflex mirror	Automatic instant-return type
Reliex militor	with lock facility. Incorporates
	brake mechanism and air
	damper for reduced vibration
	and noise
Double of field	
Depth-of-field	Coaxial with the mirror lock
preview Film advance lever	lever
Film auvance lever	30° stand-off angle and 140°
	winding angle; wound in single stroke or series of small
	stroke or series of small strokes
Examp country	
Frame counter	Additive type; automatically reset when camera buck is
Films accordingly	opened
Film rewind	By rewind crank after depress-
	ing film rewind button. Auto-
	matic film rewind possible with motor drive MD-4
Comore had	
Camera back	Interchangeable. Opened by
	pulling out the film rewind knob (after unlocking)
Detterios	Knob (after unlocking)
Batteries	Two type SR 44/G 13 1.5 V
	silver oxide round cells. When
	MD-4 is mounted, the camera
	takes its power from the motor
	batteries
Dimensions	About
	96.5 × 148.5 × 65.5 mm
	$(H \times W \times D)$
Weight	About 700 g

#### Accessories:

High-eyepoint finder DE-3 Action finder DA-2 Waist-level finder DW-3 Motor MD-4 Various focusing screens Flash units 16A/17 Data Back MF-14/MF-17/MF-18





# Nikon FM3A

Order code	FAA380NA black
	FFAA380AA silver
Camera type	35 mm single-lens reflex cam-
	era with electronically and
	mechanically controlled focal-
Distance formant	plane shutter 24 $\times$ 36 mm
Picture format Lens mount	Nikon F mount
Shutter	Vertical-travel focal-plane
Shatter	shutter
Shutter speed	A (aperture-priority auto):
•	8 sec. to 1/4000 sec. electronic
	stepless control (indications are
	1 sec. to 1/4000 sec.)
Viewfinder	Eye-level pentaprism type
Eyepoint	14 mm (at –1.0 dpt)
Focusing screen	K3 type (split-image micro-
	prism type, clear matte screen III) provided as standard; B3
	type and E3 type are optional
	accessories
Viewfinder frame	
coverage	Approx. 95%
Viewfinder	Approx. 0.8 $\times$ with 50 mm lens
magnification	set to infinity
Viewfinder	Shutter speed; exposure meter
information	indication; shutter indication; direct aperture value; exposure
	compensation mark; ready light
Reflex mirror	Instant-return type
	Al type (automatic compensa-
. ,	tion at full aperture f-stop)
Metering system	Full aperture exposure meter-
	ing system: approx. 60% of the
	meter's sensitivity is concentra-
	ted on the 12 mm dia. circle;
Motoring range	centre-weighted EV 1 to EV 20 at ISO 100/21°
Metering range	with 50 mm f/1.4 lens
Film speed setting	Automatic setting to DX code
·····j·····j	or manual; automatic: DX –
	ISO 25/15° to 5000/38°;
	manual: ISO 12/12° to
_	6400/39°
Exposure	Exposure compensated to
compensation	$\pm 2$ EV in units of 1/3 EV steps (no plus compensation at ISO
	12/12° and no minus compen-
	sation at ISO 6400/39°)
Auto exposure lock	Enabled by pressing the AE
	lock button
Film advance	Single-stroke type; lever pro-
	vided; 30° standoff angle and
	135° winding angle; automatic film advance enabled with
	MD-12 (optional)
Frame counter	Additive type 1 to 36;
	automatic reset
Film rewinding	automatic reset Manual with rewind crank af-
Film rewinding	automatic reset Manual with rewind crank af- ter pressing film reset button
	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer
Film rewinding	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10
Film rewinding Self timer	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off
Film rewinding Self timer Lens aperture	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off instant-return type
Film rewinding Self timer	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off
Film rewinding Self timer Lens aperture	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off instant-return type Activated by pressing exposure
Film rewinding Self timer Lens aperture Multiple exposure	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off instant-return type Activated by pressing exposure lever X contact; synchronisation up to 1/250 sec.
Film rewinding Self timer Lens aperture Multiple exposure	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off instant-return type Activated by pressing exposure lever X contact; synchronisation up to 1/250 sec. TTL auto flash: with SB-28,
Film rewinding Self timer Lens aperture Multiple exposure Sync contact Flash control	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off instant-return type Activated by pressing exposure lever X contact; synchronisation up to 1/250 sec. TTL auto flash: with SB-28, SB-29, etc.
Film rewinding Self timer Lens aperture Multiple exposure Sync contact	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off instant-return type Activated by pressing exposure lever X contact; synchronisation up to 1/250 sec. TTL auto flash: with SB-28, SB-29, etc. To -1 EV activated with TTL
Film rewinding Self timer Lens aperture Multiple exposure Sync contact Flash control	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off instant-return type Activated by pressing exposure lever X contact; synchronisation up to 1/250 sec. TTL auto flash: with SB-28, SB-29, etc. To -1 EV activated with TTL flash compensation button on
Film rewinding Self timer Lens aperture Multiple exposure Sync contact Flash control Flash compensation	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off instant-return type Activated by pressing exposure lever X contact; synchronisation up to 1/250 sec. TTL auto flash: with SB-28, SB-29, etc. To –1 EV activated with TTL flash compensation button on the camera
Film rewinding Self timer Lens aperture Multiple exposure Sync contact Flash control	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off instant-return type Activated by pressing exposure lever X contact; synchronisation up to 1/250 sec. TTL auto flash: with SB-28, SB-29, etc. To –1 EV activated with TTL flash compensation button on the camera Lights up: flash is fully charged
Film rewinding Self timer Lens aperture Multiple exposure Sync contact Flash control Flash compensation	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off instant-return type Activated by pressing exposure lever X contact; synchronisation up to 1/250 sec. TTL auto flash: with SB-28, SB-29, etc. To –1 EV activated with TTL flash compensation button on the camera Lights up: flash is fully charged (SB-28/SB-29, etc.); blinks: full
Film rewinding Self timer Lens aperture Multiple exposure Sync contact Flash control Flash compensation	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off instant-return type Activated by pressing exposure lever X contact; synchronisation up to 1/250 sec. TTL auto flash: with SB-28, SB-29, etc. To –1 EV activated with TTL flash compensation button on the camera Lights up: flash is fully charged (SB-28/SB-29, etc.); blinks: full out-put warning, or shutter speed settings from 1/500 to
Film rewinding Self timer Lens aperture Multiple exposure Sync contact Flash control Flash compensation	automatic reset Manual with rewind crank af- ter pressing film reset button Mechanically controlled; timer duration of approx. 4 to 10 sec.; can be switched off instant-return type Activated by pressing exposure lever X contact; synchronisation up to 1/250 sec. TTL auto flash: with SB-28, SB-29, etc. To –1 EV activated with TTL flash compensation button on the camera Lights up: flash is fully charged (SB-28/SB-29, etc.); blinks: full





Film speeds	
with TTL AE	ISO 12/12° to 1000/31°
Cable contact	JIS contact with screw lock
Accessory shoe	Hot-shoe contact (sync contact,
Accessory shoe	
	ready-light contact, monitor
	contact, stop-signal contact for
	TTL flash) with safety lock
Camera back	Hinged back; pops open when
	the film rewind lever is pulled
	up; detachable; interchange-
	able with data back FM16
Power source	One 3 V lithium battery CR-1/3N,
	or two 1.55 V silver-oxide bat-
	teries SR44, or two 1.5 V (AA-
	type) alkaline batteries LR44
Meter-on timer	Lightly pressing the shutter re-
	lease button switches meter
	on; meter stays on for approx.
	16 sec. after finger leaves the
	button, then switches off auto-
	matically
Battery power check	Displayed for 16 seconds with
	the meter-on timer. The expo-
	sure meter does not work if the
	batteries are exhausted
Manual and filling and the	
Number of film rolls	By lightly pressing the shutter-
that can be shot	release button for 10 seconds,
	release button for 10 seconds,
	release button for 10 seconds, then pressing it all the way,
	release button for 10 seconds, then pressing it all the way, until the timer activates. With
	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter
	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture-
	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode:
	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode: one 3 V lithium battery: approx. 110 films at 20° or 60 films at -10 °C
	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode: one 3 V lithium battery: approx. 110 films at 20° or 60 films at -10 °C two 1.55 V silver-oxide bat-
	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode: one 3 V lithium battery: approx. 110 films at 20° or 60 films at -10 °C two 1.55 V silver-oxide bat- teries: approx. 120 films at 20°
	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode: one 3 V lithium battery: approx. 110 films at 20° or 60 films at -10 °C two 1.55 V silver-oxide bat- teries: approx. 120 films at 20° or 65 films at $-10$ °C
	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode: one 3 V lithium battery: approx. 110 films at 20° or 60 films at -10 °C two 1.55 V silver-oxide bat- teries: approx. 120 films at 20° or 65 films at -10 °C two 1.5 V alkaline batteries:
	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode: one 3 V lithium battery: approx. 110 films at 20° or 60 films at -10 °C two 1.55 V silver-oxide bat- teries: approx. 120 films at 20° or 65 films at $-10$ °C two 1.5 V alkaline batteries: approx. 50 films at 20° or
that can be shot	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode: one 3 V lithium battery: approx. 110 films at 20° or 60 films at -10 °C two 1.55 V silver-oxide bat- teries: approx. 120 films at 20° or 65 films at $-10$ °C two 1.5 V alkaline batteries: approx. 50 films at 20° or 10 films at $-10$ °C
that can be shot Tripod socket	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode: one 3 V lithium battery: approx. 110 films at 20° or 60 films at -10 °C two 1.55 V silver-oxide bat- teries: approx. 120 films at 20° or 65 films at $-10$ °C two 1.5 V alkaline batteries: approx. 50 films at 20° or 10 films at $-10$ °C 1/4 inch (ISO 1222)
that can be shot Tripod socket Body finish	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode: one 3 V lithium battery: approx. 110 films at 20° or 60 films at -10 °C two 1.55 V silver-oxide bat- teries: approx. 120 films at 20° or 65 films at $-10$ °C two 1.5 V alkaline batteries: approx. 50 films at 20° or 10 films at $-10$ °C 1/4 inch (ISO 1222) In silver and black
that can be shot Tripod socket	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode: one 3 V lithium battery: approx. 110 films at 20° or 60 films at -10 °C two 1.55 V silver-oxide bat- teries: approx. 120 films at 20° or 65 films at $-10$ °C two 1.5 V alkaline batteries: approx. 50 films at 20° or 10 films at $-10$ °C 1/4 inch (ISO 1222) In silver and black 142.5 × 90 × 58 mm
that can be shot Tripod socket Body finish	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode: one 3 V lithium battery: approx. 110 films at 20° or 60 films at -10 °C two 1.55 V silver-oxide bat- teries: approx. 120 films at 20° or 65 films at $-10$ °C two 1.5 V alkaline batteries: approx. 50 films at 20° or 10 films at $-10$ °C 1/4 inch (ISO 1222) In silver and black 142.5 × 90 × 58 mm (W × H × D)
that can be shot Tripod socket Body finish	release button for 10 seconds, then pressing it all the way, until the timer activates. With 36-frame film rolls, a shutter speed of 1/250 sec. in aperture- priority auto mode: one 3 V lithium battery: approx. 110 films at 20° or 60 films at -10 °C two 1.55 V silver-oxide bat- teries: approx. 120 films at 20° or 65 films at $-10$ °C two 1.5 V alkaline batteries: approx. 50 films at 20° or 10 films at $-10$ °C 1/4 inch (ISO 1222) In silver and black 142.5 × 90 × 58 mm

Supplied with: Body cover BF-1A

Accessories: Motor MD-12 Data back MF-16 Camera cases CF-27S/CF-28S/CF-29S Rubber eyecup DK-3 Focusing screen B-3/E-3 Cable release AR-3



Nuvis V	Lite Touch Zoom 140 ED
Nuvis S	Lite Touch Zoom 120 ED
Nuvis S 2000	One Touch Zoom 90
Nuvis 300	Lite Touch Zoom 70 W
Nuvis A20	AF 240 SV
	EF 400 SV

# Nikon Nuvis V

Order code Camera type	FFA142AB IX240 (Advanced Photo System™) type autofocus AE
Usable film	lens-shutter camera with Nikon zoom lens 22.5–66 mm IX240 system (Advanced Photo
	System <sup>™</sup> ) film cartridge (for 16.7 × 30.2 mm frame format)
Print aspect ratio	Classic- frame C, wide frame H and panorama frame P
Lens	22.5 – 66 mm f/5.2 – f/7.7 (28–82.5 mm converted to
	35 mm type); 6 elements
Shutter	in 6 groups Programmed electronic shutter;
Shutter	also serves as diaphragm
Viewfinder	blades Real-image zoom viewfinder;
	frame coverage approx. 85% for H-type printed image area;
	approx. 0.34× magnification
Dioptre adjustment	at 22.5 mm, $0.85 \times$ at 66 mm -1,5 to +1,5 m <sup>-1</sup>
Viewfinder	C/H/P-type image size marks
information	(C-type and H-type with paral- lax compensation marks); auto-
	focus frame; orange LED (flash
	ready-light) – lights up: flash ready; blinks: flash being
	charged; green LED (in-focus
	indicator) – lights up: subject focused; blinks slowly (at 2 Hz):
	subject is too close; blinks
	quickly (at 8 Hz): subject is dif- ficult to focus
Focusing	Wide-area passive-type autofo-
	cus system; activated by lightly pressing shutter release button;
	distance range from 0.45 m to
Focus lock	infinity Focus is locked as long as shut-
	ter release button is lightly
Exposure control	pressed Electronically controlled pro-
	gram AE; auto exposure range (ISO 200/24°): EV 6–17 at
	22.5 mm, EV 6–18 at 66 m;
	flash fires automatically if the available light is low
Film speed setting	ISO 50/18°, 100/21°, 200/24°,
	400/27°, 800/30° or 1600/33° automatically set
Film operation	Drop-in loading system; wrong
	film loading prevention mecha- nism; frame counter: shown in
	the LCD panel; count-down
Self-timer	type Electronically controlled; ac-
	tivated by depressing shutter
	release button; 10 sec. timer duration, blinking/lighting up in
Film advance	two steps
Film advance	Film is automatically thrust to first frame after inserting cart-
	ridge; film automatically ad-
	vances by one frame after each shot; auto rewind at end of film
	roll; mid-roll rewind function available
Built-in flash	Four flash modes available:
	auto flash, flash cancel, any- time flash and slow sync; flash
	automatically fires when avail-
	able light is low or subject is backlit
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Flash shooting range	Approx. 0.45–4.2 m at 22.5 mm, approx. 0.45–2.8 m at 66 mm (ISO 200/24°); shutter release button is locked during flash charging; recycling time
Red-eye reduction mode	approx. 8 sec. Red-eye Reduction lamp lights up for approx. 1 sec. before flash fires
Battery life	Approx. 10 rolls of 25 exposure film when flash is used for half of exposures
LCD panel	Frame counter, flash mode, red- eye reduction, remote control/ self-timer, cartridge, low bat- tery power, data recording, title and number of desired prints
Power source Data recording function	One 3 V lithium battery CR2 Magnetic recording system; date/title/number of desired prints; date displaying in LCD panel with five choices: year/month/day, hour/minute, month/day/year, day/month/ year or no recording; 24-hour cycle with no am/pm; leap-year adjustment until 2030; built-in clock with timing accuracy with- in ±90 sec. a month; power source is same as camera body; number of desired prints (1 to 9) can be specified; title record- ing function; selectable from 30 titles in 12 languages which can be printed on back of pic- tures
Dimensions	Approx. 91.5 $\times$ 62 $\times$ 30 mm (W $\times$ H $\times$ D)
Weight	Approx. 155 g (without battery)

Accessories: Remote control ML-L1 Case CSL 24

## **Remote Control ML-L1**

Order code Remote control Release delay Switch-off Range Battery life Dimensions

Weight

FFW00101 Infrared remote release Approx. 2 sec. Automatic; 2 min. after last use Frontal approx. 5 m Approx. 10 years Approx. 60  $\times$  27  $\times$  10 mm (W  $\times$  H  $\times$  D) Approx. 13 g (including battery)





# Nikon Nuvis S

Order code Camera type	FFA092AB IX240 (Advanced Photo Sys- tem™) type autofocus AE lens-
	shutter camera with Nikon
Usable film	zoom lens 22.5 – 66 mm IX240 film cartridge (Advanced Photo System™) (for frame
Print aspect ratio	format 16.7 mm × 30.2 mm) Classic-frame C; wide frame H;
Lens	panorama frame P 22.5 – 66 mm f/5.2 – f/7.7
	(28 – 82.5 mm converted to 35 mm type); 6 elements in
Churthan	6 groups
Shutter	Programmed electronic shutter with diaphragm function
Viewfinder	Real-image zoom viewfinder; frame coverage approx. 85%
	for H-type printed image area;
	approx. $0.34 \times$ magnification at 22.5 mm, approx. $0.85 \times$ at
	66 mm; dioptre adjustment: -1.5 to +1.5 m <sup>-1</sup>
Viewfinder	C/H/P-type image size frame
information	marks (C and H-type with par- allax compensation marks);
	autofocus frame; orange LED
	(flash ready-light) – lights up: flash ready; blinks: flash being
	charged; green LED (in-focus
	indicator) – lights up: subject focused; blinks slowly (at 2 Hz):
	subject too close; blinks quickly
	(at 8 Hz): subject is difficult to focus
Focusing	Wide-area passive autofocus
	system; activated by lightly pressing shutter release button;
	distance range from 0.45 m to
Focus lock	infinity Focus is locked as long as shut-
	ter release button is lightly pressed
Exposure control	Electronically controlled pro-
	gram; auto exposure range (ISO 200/24°): EV 6 – 17 at
	22.5 mm, EV 6 – 18 at 66 mm;
	flash fires automatically if the available light is low
Film speed setting	ISO 50/18°, 100/21°, 200/24°, 400/27°, 800/30° and
	1600/33° automatically set
Film operation	Drop-in loading system; wrong film-loading prevention mecha-
	nism; frame counter: shown in
Self-timer	LCD panel; count-down type Electronically controlled; ac-
	tivated by depressing shutter
	release button; 10 sec. timer duration, blinking/lighting up in
Film advance	2 steps Film is automatically advanced
	to the first frame after inserting cartridge; film automatically
	advances by one frame after
	each shot; auto rewind at the end of film roll; mid-roll rewind
	function available
Remote control Built-in flash	Available as optional accessory Four modes available: auto
	flash, flash cancel, anytime
	flash and slow sync; flash fires automatically if light is low or
	subject is back lit





	Approx. $0.45 - 4.2$ m at 22.5 mm; approx. $0.45 - 2.8$ m at 66 mm (ISO 200/24°); shutter release button is locked during flash charging; recycling time approx. 8 sec.
Red-eye reduction mode	Red-eye reduction lamp lights up for approx. 1 sec. before flash fires
Battery life	Approx. 10 rolls of 25-exposure film when flash is used for half of exposures
LCD panel	(power is on): frame counter; flash mode; red-eye reduction; remote control/self-timer; car- tridge; low battery power; data recording; title and number of desired prints
Power source	One 3 V lithium battery CR2
Data recording function	Magnetic recording system; date/title/No. of desired prints; date display in the LCD panel with five choices: year/month/ day, hour/minute, month/day/ year, day/month/year, or no re- cording; 24-hour cycle with no am/pm; leap year adjustment until 2030; built-in clock with timing accuracy within ±90 sec. a month; power source same as camera body; number of de- sired prints (1 to 9) can be spe- cified; title recording function: selectable from 30 titles in 12 languages which can be
Dimensions	printed on the back of pictures Approx. $91.5 \times 62 \times 30$ mm (W × H × D)
Weight	Approx. 155 g (without battery)



Accessory: Infrared remote control ML-L1

## **Remote Control ML-L1**

FFW00101 Infrared remote release Approx. 2 sec. Automatic; 2 min. after last use Frontal approx. 5 m Approx. 10 years Approx. 60  $\times$  27  $\times$  10 mm (W  $\times$  H  $\times$  D) Approx. 13 g (including battery)

Weight





# Nikon Nuvis S 2000

Order code Camera type	FAA122AB IX240 (Advanced Photo- System™) type autofocus
Usable film Print aspect ratio	viewfinder camera IX240 cartridge APS 16.7 × 30.2 mm; wide frame H, classic C and pano-
Lens	rama P 24–48 mm f/4.5–f/8.2 (30 mm–60 mm converted to 35 mm format); 5 elements in
Focusing range Shutter	4 groups Approx. 0.60 m to infinity Programmed electronic shutter; also serves as diaphragm
Viewfinder	blades; shutter speeds approx. 2.5 sec. – 1/500 sec. Real-image zoom viewfinder, frame coverage approx. 85% for H-type printed image area;
Viewfinder	magnification approx. 0.32 × at 24 mm; approx. 0.56 × at 48 mm C/H/P-type image size frame
information	marks; with parallax compen- sation marks and AF metering area; orange LED – lights up: flash ready; blinks (at 4 Hz): flash being charged; blinks
	quickly (at 8 Hz) flash is pop- ped up incorrectly; green LED – lights up: subject focussed, blinks slowly (at 2 Hz) subject is too close; blinks quickly (at 4 Hz) film is being rewound
Focusing	Passive autofocus system and large AF metering area; acti- vated by lightly pressing shut- ter release button; distance range from 0.4 m to infinity; with AF assist illuminator (also serves as red-eye reduction
Focus lock	lamp) Focus is locked as long as shut- ter release button is lightly pressed
Exposure control	Electronically controlled pro- gram; auto exposure range at ISO 200/24°: EV 6–17 at 24 mm, EV 6–18 at 48 mm; flash fires automatically if the
Film speed setting	available light is low ISO 50/18°, 100/21°, 200/24°, 400/27° and 800/30° automa-
Film operation	tically set Drop-in auto loading system; wrong film loading prevention
Frame counter	mechanism Shown in LCD panel: count-
Self-timer	down type Electronically controlled; ac- tivated by depressing shutter
Film advance	release button; 10 sec. timer duration, blinking/lighting up in two steps; Film is automatically thrust to first frame after inserting car- tridge; film automatically ad- vances by one frame after each shot; auto rewind at end of film roll; mid-roll rewind function available





Built-in flash	with following properties: auto flash, flash cancel, anytime flash and slow sync, flash auto- matically fires when available light is low or subject is back lit; red-eye reduction lamp, lights up for approx. 1 sec. be- fore flash fires; shutter release button is locked during flash charging
Flash shooting range	Approx. 0.6 – 5.3 m at 24 mm; 0.6 – 2.8 m at 48 mm (ISO 200/24°); shutter release button is locked during flash charging
Flash recycling time	Approx. 6 sec.
Battery life	Approx. 0 sec. Approx. 10 rolls of 25 expo-
battery me	sures when flash is used for
	half of exposures
LCD panel	Frame counter; flash mode;
Leb puller	red-eye reduction; cartridge;
	infinity setting; low battery
	power; date/hour; print on
	back of pictures
Power source	One 3 V lithium battery CR2
Data recording	Magnetic recording system;
function	five choices one LCD panel:
	year/month/day, hour/minute,
	month/day/year, day/month/
	year or no recording; 24-hour
	cycle; leap-year adjustment un-
	til 2037; built-in clock with ti-
	ming accuracy within ±90 sec.
	a month; power supply is the
	same as camera body
Dimensions	Approx. $89 \times 60.5 \times 29$ mm
	$(W \times H \times D)$ (camera closed)
	Approx. 122.5 $\times$ 60.5 $\times$ 29 mm
	$(W \times H \times D)$ (camera open)
Weight	Approx. 140 g
	(without battery)



Accessory: Infrared remote control ML-L1

## **Remote Control ML-L1**

FFW00101 Order code Remote control Infrared remote shutter release Shutter release delay Approx. 2 sec. Switch-off automatic; 2 min. after last use frontal approx. 5 m Range Battery life Approx. 10 years Dimensions Approx.  $60 \times 27 \times 10$  mm  $(W \times H \times D)$ Weight Approx. 13 g (including battery)



# Nikon Nuvis 300

Order code	FFA132AB
Camera type	IX240 (Advanced Photo-Sys-
	tem™) type autofocus AE lens-
	shutter camera with
	28–80 mm Nikon zoom lens
Usable film	IX240 film cartridge
Print aspect ratio	APS 16.7 × 30.2 mm; wide
•	frame H, classic C und panora-
	ma P
Lens	28–80 mm f/4.2–f/11;
	(35–100 mm converted to
	35 mm type); 8 elements in
	7 groups
Focusing range	0.7 to infinity
Shutter	Programmed electronic shutter;
	also serves as diaphragm
	blades; shutter speeds: approx.
	1/3 sec. to 1/400 sec.
Viewfinder	Real-image zoom viewfinder;
	frame coverage approx. 85%
	for H-type printed image area;
	approx. $0.4 \times \text{magnification}$
	at 28 mm, approx. 0.92 $\times$ at
D'auto all'actores	80 mm
Dioptre adjustment Viewfinder	$-3 \text{ to } +1 \text{ m}^{-1}$
information	C/H/P-type image size frame marks with parallax compensa-
IIIOIIIauoii	tion marks; autofocus frame;
	green LED – lights up: subject
	focused; blinks quickly (at 8 Hz):
	subject is too close; blinks
	slowly (at 4 Hz): available light
	is too low
Focusing	Infrared-active autofocus sys-
	tem; activated by lightly press-
	ing shutter release button;
	distance range: 0.7 m to infini-
	ty (at 28 mm) or 0.75 m to infi-
	nity (at 80 mm); infinity setting,
	shutter release button is locked
	when distance to subject is less
	than 0.7 m (at 28 mm) or
	0.75 m (at 80 mm)
Focus lock	Focus is locked as long as
	shutter release button is lightly
	pressed
Exposure control	Electronically controlled pro-
	gram; auto exposure range
	(ISO 200/24°): EV 7–16.5 at 28 mm, EV 8.75–17.5 at
	80 mm; flash fires automatical-
	ly if the available light is low
Film speed setting	ISO 50/18°, 100/21°, 200/24°,
Thin speed setting	400/27°, 800/30°, 1600/33°
	and 3200/36°, automatically set
Film operation	Drop-in loading system;
· ···· operation	double-exposure prevention
	(DEP)
Film advance	Film is automatically wound to
	the first frame after inserting
	cartridge; film automatically
	advances by one frame after
	each shot; auto rewind at the
	end of film roll; mid-roll rewind
	function available
Frame counter	Shown in the LCD panel;
	count-down type
Self-timer	Electronically controlled; ac-
	tivated by depressing shutter
	release button; 10 sec. timer
	duration, blinking/lighting up in
	5551
	two steps





Built-in flash	With following properties: auto flash, flash cancel, any- time flash and slow sync, flash automatically fires when avail- able light is low or subject is back lit, Red-eye reduction lamp, lights up for approx. 1 sec. before flash fires; shutter release button is locked during flash charqing
Flash recycling time Flash shooting range	Approx. 6 sec. Approx. 0.7–6 m at 28 mm; approx 0.75–2.2 m at 80 mm (ISO 200/24°)
Battery life	Approx. 10 rolls of 25 expo- sures when flash is used for half of exposures
LCD panel	Frame counter; flash mode; red-eye reduction; self-timer; cartridge; infinity setting; low battery power; title, date/time and film speed
Battery source Data recording function	One 3 V lithium battery CR2 Magnetic recording system; five date/time formats: year/ month/day, month/day/year, day/month/year, day/hour/mi- nute or no recording; 24-hour cycle with automatic leap-year adjustment until 2027; built-in clock with timing accuracy with- in ±90 sec. a month; power supply is the same as camera body; titles: five titles in five languages can be printed on the back of the pictures
Dimensions	Approx. 98.5 $\times$ 59 $\times$ 36.5 mm (W $\times$ H $\times$ D)
Weight	Approx. 155 g (without batteries)



Accessory: Infrared remote control ML-L1

## **Remote Control ML-L1**

Order code	FF\
Remote control	Infr
Shutter release delay	Ар
Switch-off	Aut
Range	Fro
Battery life	Ap
Dimensions	Ар
	(W

Weight

FFW00101 Infrared remote shutter release Approx. 2 sec. Automatic; 2 min. after last use Frontal approx. 5 m Approx. 10 years Approx. 60  $\times$  27  $\times$  10 mm (W  $\times$  H  $\times$  D) Approx. 13 g (including battery)


## Nikon Nuvis A20

Order code	FFA050BA
Camera type	IX240 (Advanced Photo-Sys-
	tem <sup>™</sup> ) type autofocus lens-
	shutter camera
Usable Film	IX240 film cartridge
Print aspect ratio	APS 16.7 × 30.2 mm;
	wide frame H, classic C and
Information	panorama P
exchange system	Optical information exchange
Lens	25 mm f/5.6 (31 mm converted
Lens	to 35 mm format: 3 elements in
	3 groups)
Focusing range	0.9 m to infinity
Lens cover	Also serves as power switch
Focusing	Infrared-active autofocus
-	system
Focus lock	Focus is locked as long as
	shutter release button is lightly
	pressed
Shutter speed	1/200 sec. and 1/125 sec.;
	1/50 sec. with flash
Viewfinder	Reversed-Galilean Albada-type
Viewfinder	bright-frame viewfinder
Viewfinder information	C/H/P-type image size frame marks and autofocus frame
Exposure control	Electronically controlled
Exposure control	program
Film speed setting	ISO 100/21° or 200/24° auto-
i nin speca setting	matically set; with faster
	speeds automatically set to ISO
	200/24°
Film operation	Drop-in loading system;
	double-exposure prevention
	(DEP); film is automatically
	wound to the first frame after
	inserting cartridge; film auto-
	matically advances by one fra-
	me after each shot; auto re-
	wind at the end of film roll; mid- roll rewind function available
Self-timer	Electronically controlled; acti-
Sell-ulliel	vated by depressing shutter
	release button; 10 sec. timer
	duration; can be switched off
Built-in flash	with following properties:
	auto flash, flash can be set
	(flash button) when available
	light is low or subject is back
	lit; flash can be set (flash but-
	ton) to reduce red-eyes (lights
	up for approx. 0.7 sec. before
	flash fires); shutter release but-
	ton is locked during flash char-
Flash shooting range	ging Guide number 12.0
riash shouling range	(ISO 200/24°); range 0.9–4.5 m
	(ISO 200/24°)
Flash recycling time	Approx. 7 sec.
Battery life	Approx.15 films of 25 expo-
,	sures when flash is used for
	half of exposures
Power source	Two 1.5 V LR6 (AA-size
	alkaline) batteries
Dimensions	Approx. 113 $\times$ 62 $\times$ 35.5 mm
	$(W \times H \times D)$
Weight	Approx. 150 g
	(without batteries)



## Lite Touch Zoom 140 ED

Order code	FCA500AA
Camera type	35 mm autofocus lens-shutter
Usable film	camera with Nikon zoom lens DX-coded 35 mm film
Picture format	$24 \times 36$ mm;
Panorama	Lite Touch Zoom 140 ED QD
	only: 13.3 × 36 mm
Lens	38-140 mm f/5.3-10.5; 10 ele-
	ments in 8 groups (with ED
Chutten	lenses and aspherical lenses) Programmed electronic shutter;
Shutter	also serves as diaphragm
	blades
Shutter speed	2 sec. to 1/500 sec.
Lens cover	Slide type lens cover with
	power-switch function
Viewfinder	Real-image viewfinder; frame
	coverage greater than approx.
	80% in regular-size frame; magnification approx. 0.44×
	at 38 mm, approx. 1.13× at
	140 mm
Dioptre adjustment	Approx1.5 to +1.5 m <sup>-1</sup> ;
	anti-fog viewfinder
Viewfinder	Image-size frame marks with
information	parallax compensation marks;
	autofocus frame marks; green LED focus indication – lights
	up: subject in focus, blinks
	slowly (at 8 Hz): focussing is
	not possible; orange LED flash-
	ready light – lights up: flash is
	ready, blinks slowly (at 2 Hz):
	flash is charging, blinks quickly
	(at 8 Hz): pop-out flash is being
Focusing	pressed down Passive autofocus system ac-
rocusing	tivated by lightly pressing the
	shutter release button; distance
	range of approx. 0.74 m to
	infinity
Focus lock	Focus is locked as long as
	shutter release button remains lightly pressed
Exposure control	Electronically controlled pro-
	gram AE; auto exposure range
	at ISO 100/21°: EV 4–16 at
	38 mm or EV 6–16 at 140 mm;
	with ISO 400/27°: EV 6–17 at
	38 mm or EV 6–18 at 140 mm; flash automatically fires if avail-
	able light is low
Film speed setting	ISO 50/18°, 100/21°, 200/22°,
J	400/27°, 800/30°, 1600/33° or
	3200/36° automatically set
Film loading	Automatically advances to first
	frame after film loading; with
Fromo countor	film type confirmation window Shown in LCD panel; additive-
Frame counter	type frame counter; counting
	backwards during film rewind
Self-timer	Electronically controlled; ac-
	tivated by depressing shutter
	release button; process indica-
	tion by blinking or lit self-timer
	lamp; timer duration 10 sec.; can be switched off
Film advance	Automatically advances one
	frame after each exposure; au-
	tomatic rewind at end of film
	roll; mid-roll rewind possible
Built-in flash	Four modes: auto flash; flash
	cancel, anytime flash and slow
	sync; flash fires automatically
	when available light is low or
	subject back-lit





Flash shooting range	
	approx. 0.75 m to 4.1 m at
	38 mm; approx. 0.8 m to 2 m
	at 140 mm
	With ISO 400/27°: approx.
	0.75 m to 8.2 m at 38 mm; ap-
	prox. 0.8 m to 4 m at 140 mm;
	the shutter release button is
	locked during charging of the
	flash; flash recycling time ap-
	prox. 6 sec.
Red-eye	Before flash fires red-eye
reduction mode	reduction lamp lights up for
	approx. 6 sec.
LCD panel	Frame counter; flash mode;
	red-eye reduction; self-timer/
	remote control; infinity mode;
	low battery power; data
	imprint (LT 140 QD only)
Power source	One 3 V lithium battery CR123
	or DL 123A
Battery life	Approx. 12 films of 24 expo-
	sures if flash is used for half
	of exposures
Dimensions	Approx. 114 $\times$ 60 $\times$ 41 mm
	$(W \times H \times D)$
Weight	Approx. 210 g
	(without battery)



### Lite Touch Zoom 140 ED Data

The same technical data as with Nikon Lite Touch 140 ED, but with additional data back with LCD data panel and buttons

Order code Data imprint	FCA502AB With seven-point LED; in pan- orama format also possible; automatic sensitivity setting for DX-coded films (ISO 50/16°–300/36°)
Imprinted data	Year/month/day/hour and mi- nutes (24 hour clock) in four different formats: year/month/ day; month/day/year; day/ month/year; day/hour/minute, or no imprint; leap-year adjust- ment up to the year 2039; power supply is the same as camera body
Timing accuracy	Built-in clock with ±90 sec. per month
Dimensions	Approx. 114 $\times$ 60 $\times$ 41 mm (W $\times$ H $\times$ D)
Weight	Approx. 210 g (without battery)

Accessory: Infrared remote control ML-L1

## Remote Control ML-L1

 Order code
 FFW00101

 Remote control
 Infrared remote

 Shutter release delay
 Approx. 2 sec.

 Switch-off
 Automatic; 2 m

 Range
 Frontal approx.

 Battery life
 Approx. 10 yea

 Dimensions
 Approx. 60 × 1

 (W × H × D)
 (W × H × D)

FFW00101 Infrared remote shutter release Approx. 2 sec. Automatic; 2 min. after last use Frontal approx. 5 m Approx. 10 years Approx. 60 × 27 × 10 mm (W × H × D) Approx. 13 g (including battery)

Weight

## Lite Touch Zoom 120 ED

Order code	FCA450AA
Camera type	35 mm autofocus lens-shutter
	camera with Nikon zoom lens
Usable film	DX-coded 35 mm film
Picture format	24 × 36 mm; panorama (Lite
	Touch Zoom 120 ED QD only):
	13.3 × 36 mm
Lens	38–120 mm f/5.3–f/10.5; 7 ele-
	ments in 5 groups (with ED
	lenses and aspherical lenses)
Shutter	Programmed electronic shutter;
	also serves as diaphragm
	blades
Shutter speed	2 sec. to 1/360 sec.
Lens cover	Slide type lens cover with
	power-switch function
Viewfinder	Real-image viewfinder; frame
	coverage greater than approx.
	80% in regular-size frame;
	magnification approx. $0.44  imes$
	at 38 mm, approx. 1.13× at
	120 mm
Dioptre adjustment	Approx1.5 to +1.5 m <sup>-1</sup> ;
	anti-fog viewfinder
Viewfinder	Image-size frame marks with
information	parallax compensation marks;
	autofocus frame marks; green
	LED focus indication – lights
	up: subject is focussed, blinks
	slowly (at 2 Hz): focussing is
	not possible; orange LED flash-
	ready light – lights up: flash is
	ready; blinks slowly (at 2 Hz):
	flash is charging, blinks quickly
	(at 8 Hz): pop-out flash is being
	pressed down
Focusing	Passive autofocus system ac-
	tivated by lightly pressing the
	shutter release button; distance
	range of approx. 0.75 m to infi-
	nity at 38 mm; of approx. 0.8 m
Fe ave le alc	to infinity at 120 mm Focus is locked as long as
Focus lock	shutter release button remains
Exposure control	lightly pressed Electronically controlled pro-
Exposure control	gram AE; auto exposure range
	with ISO 100/21°: EV 4–17 at
	38 mm or EV 6–19 at 120 mm;
	with ISO 400/27°: EV 6–17 at
	38 mm or EV 6–19 at 120 mm;
	flash fires automatically if avail-
	able light is low
Shutter speed setting	5
Shutter speca setting	400/27°, 800/30°, 1600/33° or
	3200/36° automatically set
Film loading	Automatically advances to first
· · · · · · · · · · · · · · · · · · ·	frame after film loading; with
	film type confirmation window
Frame counter	Shown in LCD panel; additive-
	type frame counter; counting
	backwards during film rewind
Self-timer	Electronically controlled;
-	activated by depressing shutter
	release button; process indica-
	tion by blinking or lit self-timer
	lamp; timer duration 10 sec.;
	can be switched off
Film advance	Automatically advances one
	frame after each exposure; au-
	tomatic rewind at end of film
	roll; mid-roll rewind available





Built-in flash	Four modes: auto flash; flash
	cancel, anytime flash and slow
	sync; flash fires automatically
	when available light is low or
	subject back-lit
Flash shooting range	With ISO 100/21°:
	approx. 0.75 m to 4.1 m at
	38 mm; approx. 0.8 m to 2 m
	at 120 mm
	With ISO 400/27°: approx.
	0.75 m to 8.2 m at 38 mm;
	approx. 0.8 m to 4 m at
	120 mm: the shutter release
	button is locked during charg-
	ing of the flash; flash recycling
	time approx. 6 sec.
Red-eye	Red-eye reduction lamp lights
reduction mode	1 sec. before flash fires
LCD panel	Frame counter; flash function;
Leb parler	red-eye reduction; self-timer/
	remote control; infinity mode
Power source	One 3V lithium battery CR123
Tower Source	or DI 123A
Battery life	Approx. 12 films of 24 expo-
battery me	sures if flash is used for half
	of exposures
Dimensions	Approx. $114 \times 60 \times 41$ mm
Dimensions	$(W \times H \times D)$
Weight	Approx. 210 g
weight	(without battery)
	(without battery)



## Lite Touch Zoom 120 ED Data

The same technical data as with Nikon Lite Touch 120 ED, but with additional data back with LCD data panel and buttons

Order code Data imprint	FCA452AB With seven-point LED; in pan- orama format also possible
Imprinted data	Year/month/day/hour and mi- nutes (24-hour clock) in four different formats: year/month/ day; month/day/year; day/ month/year; day/hour/minute, or no imprint; leap-year adjust- ment up to the year 2039; power supply is the same as camera body
Timing accuracy	Built-in clock with $\pm 90$ sec. per month
Dimensions	Approx. 114 $\times$ 60 $\times$ 41 mm (W $\times$ H $\times$ D)
Weight	Approx. 210 g (without battery)

Accessory: Infrared remote control ML-L1

## Remote Control ML-L1

Order code FFW00101 Infrared remote shutter release Remote control Shutter release delay Approx. 2 sec. Switch-off Automatic; 2 min. after last use Range Frontal approx. 5 m **Battery life** Approx. 10 years Dimensions Approx. 60 × 27 × 10 mm  $(W \times H \times D)$ Weight Approx. 13 g (including battery)



## One Touch Zoom 90

Order code	FCA470AA
Type of camera	35 mm auto-focus lens-shutter
	camera with Nikon zoom lens
Usable film	DX-coded 35 mm film
Picture format	24 × 36 mm
Lens	38–90 mm, f/4.8–f/10.5;
	6 elements in 6 groups
Lens cover	Built-in barrier type
Shutter	Programmed electronic type;
	also serves as diaphragm blades
Viewfinder	Image size frame marks (with
information	parallax compensation marks);
	autofocus frame
LED indicators	Lights up: ready to shoot;
	blinks: flash being charged
Focusing	Activated by lightly pressing
	shutter release button; distance
	range approx. 0.7 m to infinity;
	the shutter locks when the sub-
	ject is closer than 0.7 m; macro
European and the	mode 0.3 to 0.7 m
Exposure control	Electronically-controlled pro-
	gram AE auto exposure range (ISO 100/21°): EV 6–16 at
	38 mm, EV 6–18 at 90 mm
Film speed setting	ISO 100/21°, 200/24°, 400/27°
r nin speed setting	and 800/30° automatically set;
	ISO 100/21° is automatically
	selected for non-DX-coded films
Film advance	Film automatically advances by
	one frame after each shot; auto
	rewind at the end of film roll:
	mid-roll rewind function available
Frame counter	Shown in the LCD panel; addi-
	tive type; counts backwards
	during film rewind
Self-timer	Electronically controlled; acti-
	vated by depressing the shutter
	release button; self-timer lamp
	blinks and lights up to show
	when ready; timer duration
	10 sec.; cancellable
Built-in flash	Four flash modes available: auto
	flash, flash cancel, anytime flash,
	slow sync flash; flash automati-
	cally fires when available light is
	low; shutter release button
	locked while flash is charging
Flash shooting range	ISO 100/21° approx. 0.7 m to
	3.5 m at 38 mm; approx 0.7 to
	3.2 m at 90 mm; flash recycling time approx. 1 sec.
Red-eye	Red-eye reduction lamp lights
reduction mode	up for approx. 1 second before
reduction mode	flash fires
LCD panel	Displays frame counter, flash
Leb punci	mode, red-eye reduction, self-
	timer, infinity focus mode, low
	battery power
Battery life	Approx. 15 rolls of 24-exposure
,	film when flash is used for half
	the exposures
Power source	One 3 V lithium battery (CR2)
Dimensions	Approx. $117 \times 64.4 \times 50.4$ mm
	$(W \times H \times D)$
Weight	Approx. 215 g
	(without battery)

## One Touch 90 Data

Technical data as with Nikon One Touch 90

Order code Imprint function	FCA472AA Imprint of year, month, day, hour, (24-hour cycle) and minute; leap year adjustment until 2049
Dimensions	$117 \times 64.4 \times 53.8 \text{ mm}$





## Lite Touch Zoom 70 W

Order code	FCA460AA
Camera type	35 mm autofocus lens-shutter camera with Nikon zoom lens
Usable film	DX-coded 35 mm film
Picture format	24 × 36 mm
Lens	28–70 mm, f/5.6–10.5;
Shutter	5 elements in 4 groups Programmed electronic shutter
Shutter speed	1 sec. to 1/220 sec.
Viewfinder	Real-image viewfinder, frame
	coverage greater than approx.
	80%; magnification approx. $0.28 \times$ at 28 mm, approx.
	$0.28 \times at 28 \text{ mm; approx.}$ $0.62 \times at 70 \text{ mm; dioptre ad-}$
	justment to approx0.8 m <sup>-1</sup>
Viewfinder	Image-size frame marks (with
information	parallax compensation marks); autofocus frame
Red LED	Lights up: ready to shoot;
	blinks: flash ready; no flash;
	lights up for an instant: subject
	in focus; blinks (at 8 Hz): flash
Focusing	is being pressed down Activated by lightly pressing
	the shutter release button; dis-
	tance range: approx. 0.9 m to
	infinity at 28 mm, 0.6 to 1 m in macro mode; infinity mode
Focus lock	Focus is locked as long as shut-
	ter release button remains
	lightly pressed
Exposure control	Electronically controlled pro- gram AE; auto exposure range
	at ISO 100/21°: EV 5–15 at
	28 mm, or EV 6–15 at 70 mm;
	flash fires automatically if
Film enougl cotting	available light is low DX-coded films: ISO 50/18°;
Film speed setting	100/21°, 200/22° or 400/27°
	automatically set; (non-DX-
	coded films automatically set
Film loading	to ISO 100/21°) Automatically advances to first
Film loading	frame after film loading; with
	film type confirmation window
Frame counter	Shown in LCD panel, additive-
	type; counting backwards during film rewind
Self-timer	Electronically controlled; ac-
	tivated by depressing shutter
	release button; process indica-
	tion by blinking or lit self-timer lamp (total of 10 sec.); timer
	duration 10 sec.; can be
	switched off
Built-in flash	Four modes: auto flash; flash
	cancel, anytime flash and slow sync; flash fires automatically if
	available light is low or subject
	back-lit; shutter release button
	is locked during charging of the
Flash shooting range	flash (with ISO 100/21°)
riash shooting range	approx. 0.9 m to 3.3 m at
	28 mm; approx. 1.2 m to 3.8 m
	at 70 mm; flash recycling time
	approx. 6 sec.





Red-eye reduction mode	Before flash fires red-eye reduction lamp lights up for approx. 1 sec.
Battery life	Approx. 1 sec. Approx. 10 film rolls of 24 ex- posures if flash is used for half of exposures
LCD panel	Frame counter; flash mode; red-eye reduction; self-timer; infinity mode; battery power
Power source	One 3 V lithium battery CR2
Dimensions	117 × 63 × 42 mm (W × H × D)
Weight	Approx. 200 g (without battery)

Accessory: Infrared remote control ML-L1

## Lite Touch Zoom 70 W Data

The same technical data as with Nikon Lite Touch Zoom 70 W, but with additional data back with LCD data panel and buttons

Order code Data imprint	FCA462AB Five data formats can be selec- ted by button: year/month/day/hour/minute; no imprint; month/day/year; day/month/year; leap-year ad- justment up to the year 2049; adjustment of shorter and longer months; 24-hour clock
Power source	One DR2025 lithium battery
Dimensions	117 × 63 × 47 mm
	$(W \times H \times D)$
Weight	Approx. 210 g (without battery)





## AF 240 SV

Order code	FCA430AA
Camera type	35 mm lens-shutter camera
Film format	24 $ imes$ 36 mm (standard 35 mm
	film format)
Lens	28 mm f/5.6 (3 elements in
	3 groups)
Focusing	Active autofocus system with
-	focus lock
Focusing distance	1 m to infinity
Shutter	Mechanical lens shutter; fixed
	shutter speed of 1/100 sec.
Viewfinder	Reverse-Galilean Albada-type
	bright-frame viewfinder;
	magnification: $0.63 \times$
Frame coverage	Approx. 85%
Frame counter	Additive type; automatically re-
	sets to "S" when the camera
	back is opened
Film speed setting	Auto setting to ISO 100/21° or
	400/27° with DX-coded film
	(ISO 100/21° with DX-coded
	film with ISO 200/24° or non
	DX-coded film)
Film operation	Film automatically advances to
	first frame when camera back
	is closed; automatic film ad-
	vance and rewind; mid-roll
Duilt in flack	rewind is possible
Built-in flash	Built-in auto flash with recyc-
	ling time of approx. 6 sec.; flash cancel and anytime flash
	by pressing dedicated buttons
	on the front of camera; red-eye
	reduction provided
Flash shooting	1–2.7 m at ISO 100/21°;
distance range	1–5.4 m at ISO 400/27°; auto
distance range	power off: camera power auto-
	matically turns off 20 sec. after
	the flash-ready LED comes on;
	to turn the power on again,
	lightly press the shutter release
	button or turn the power
	switch on
Power source	Two 1.5V LR6 (AA-size
	alkaline) batteries
Battery life	Approx. 30 rolls of 24-exposure
•	film (20 rolls of 36-exposure
	film), when flash is used for
	half of all exposures
Tripod socket	Available
Dimensions	Approx. 110 × 67 × 37 mm
	$(W \times H \times D)$
Weight	Approx. 155 g (without
	batteries)





## Nikon EF 400 SV

Order code	FCA440AA
Camera type	35 mm lens-shutter camera
Film format	24 × 36 mm
Lens	28 mm f/5.6 (3 elements in
	3 groups)
Focusing	Fixed focus from 1.2 m to
•	infinity
Shutter	Mechanical lens shutter: fixed
	shutter speed 1/100 sec.
Viewfinder	Reverse Galilean Albada-type
	bright-frame viewfinder; ma-
	gnification: 0.63×
Field coverage	Approx. 85 %
Frame counter	Additive type, automatically
Traine Counter	resets to "S" when the camera
	back is opened
Film and	
Film speed	Auto setting to ISO 100/21°
	or 400/27° with DX-coded film
	(ISO 100/21° with DX-coded
	and ISO 200/24° film with non-
	DX-coded film)
Film advance	Film automatically advances
	to first frame when camera
	back is closed; automatic film
	advance and rewind; mid-roll
	rewind is possible
Built-in flash	Built-in auto flash; flash cancel
	and anytime flash by pressing
	dedicated buttons on the front
	of camera; red-eye reduction
	provided
Auto power-off	Camera power automatically
•	turns off 20 sec. after the flash-
	ready LED comes on. To turn
	the power on again, lightly
	press the shutter release button
	or turn the power switch on
Flash shooting	1.2–2.7 m at ISO 100/21°
distance range	1.2–5.4 m at ISO 400/27°
Power source	Two 1.5V LR6 (AA-size
Tower source	alkaline) batteries
Battery life	Approx. 30 rolls of 24-exposure
battery me	film (20 rolls of 36 exposure
	film), when flash is used for
	half of all exposures
Tripod cocket	available
Tripod socket	
Dimensions	Approx. 110 $\times$ 67 $\times$ 37 mm
M	$(W \times H \times D)$
Weight	Approx. 145 g (without
	batteries)





	Tabular summary Tavola sinottica	Max (s) 1 with mark	Lens hoods/Filters/ Various Paraluce/Filtri/ Vari
	Nikkor AF lenses Obiettivi Nikkor AF		Hard cases/Soft leather pouches/Metal cases Astucci rigidi/Sacchetti soffici/Valigia metallica
	Nikkor AF special lenses Obiettivi speciali Nikkor AF	8-99-7	EL-Nikkor enlarging lenses Obiettivi per ingranditori EL-Nikkor
As TELECONVENTER TO SUT	AF-S Teleconverters AF-S Moltiplicatori di focale	NIKKOS-M 310-PP 11 NIKKOS-M 310-PP 17 大学校研究中央中央	Nikkor lenses for large-format cameras Obiettivi Nikkor per grande formato
	Nikkor lenses Obiettivi Nikkor		
	Special lenses/ Teleconverter Obiettivi speciali/ Moltiplicatori di focale		

## AF Nikkor Lenses/Obiettivi AF Nikkor

Lens	Optical constr. (groups/ lenses)	Picture angle	Minimal Aperture	Closest Market focusing distance	Maximum Reproduction Ratio (Macro Setting)	Filter Diameter	Lens hood	Lens case	Weight (g)	Dimensions (mm)					TC- 14EII	
Obiettivo	Schema ottico (gruppi/ lenti)	Angolo di campo	Apertura minima	Distanza minima di messa a fuoco	Rapporto di massima riproduzione (Selezione Macro)	Diametro ghiera portafiltri	Paraluce	Astuccio	Peso (g)	Dimensioni (mm)					tc- 14eii	
Zoom																
AF-S 17–35 mm/2.8 D IF-ED	10/13	104°-62°	22	0,28	1/4.6	77	CL-76	HB-23	745	82,5×106	1	_	1	_	_	_
AF 18–35 mm/3.5–4.5 D IF-ED	8/11	100°-62°	22	0,33	1/6.7	77	CL-52	HB-23	370	82,7×82,5	1	_	1	_	_	_
AF 24–50 mm/3.3–4.5 D	9/9	84°-46°	22	0,6 [0,5]	1/10.6 [1/8.5]	62	CL-325	HB-3	355	67,5×74,1	1	-	1	_	_	_
AF 24–85 mm/2.8–4 D IF	11/15	84°–28°30'	22	0,5 [0,21]	1/5.9 [1/2]	72	CL-S2	HB-25	545	78,5×82,5	1	_	1	_	_	_
AF 24–120 mm/3.5–5.6 D IF	11/15	84°-20°30'	22	0,5	1/4.8	72	CL-49	HB-11	550	79×80	1	_	1		_	_
AF-S 28–70 mm/2.8 D IF-ED	11/15	74°-34°20'	22	0,7 [0,5]	1/8.6 [1/5.6]	72	CL-45	HB-19	935	88,5×121,5	4	_	4			_
AF 28–80 mm/3.3–5.6 G	8/8	74°-30°10′	22	0,4	1/3.8	58	CL-15S	HB-20	265	65×79,5	1	_	1	_	_	_
AF 28–105 mm/3.5–4.5 D IF	12/16	74°-23°20'	22	0,4 0,5 [0,22]	1/5.2 [1/2]	62	CL-49	HB-18	455	73×81,5	1	_	1		_	_
AF 28–200 mm/3.5–5.6 D IF	13/16	74°–12°20′	22	2 [0,85–1,5*3]	1/12.7	72	CL-49 CL-49	HB-12	520	73×81,5	1	_	1			_
AF 35–70 mm/2.8 D	12/15	62°-34°20'	22		1/7.7 [1/4]	62	CL-33S	HB-12	665	71,5×94,5	1	_	1			_
AF 70–300 mm/4–5.6 D ED	9/13	34°20'-8°10'	32	0,6 [0,28] 1,5	1/3.9	62	CL-555	HB-15	505	74×116	1	_	1	_	_	_
AF 70-300 mm/4-5.6 G	9/13	34°20'-8°10'	22	1,5	1/3.9	62	CL-72	HB-26	470	74×116,5	-		0			_
AF-S 80–200 mm/2.8 D IF-ED*1	18/14	30°10'-12°20'		1,5	1/6.3	77	CL-M2	HB-17	1580	88×207	4	_	_	1	2	2
AF 80–200 mm/2.8 D ED*1		30°10′–12°20′ 30°10′–12°20′			1/7.1 [1/5.9]	77	CL-W2	HB-7		87×187		_	4	1		
AF VR 80-400 mm/4.5-5.6 D ED*	11/16	30°10'-12'20 30°10'-6°10'	32	1,8 [1,5] 2,3	1/1.1 [1/3.9]	77	CL-43A CL-M1	НВ-24	1300 1340	91×171	4 4	_	4		_	_
	. 11/17	50 10 -0 10	52	2,5	1/4.0	11	CL-IVIT	ПD-24	1540	91×1/1	4	_	4	_	_	_
Fisheye																
AF Fisheye 16 mm/2.8 D	5/8	180°	22	0,25	1/10	Provided	CL-315	Built-in	290	63×57	1	-	1	-	-	-
Wideangle/Grandang	golari															
AF 14 mm/2.8 D ED	12/14	114°	22	0,2	1/6.5	Provided		Built-in	670	87×86,5	1	-	1	-	-	-
AF 18 mm/2.8 D	10/13	100°	22	0,25	1/9.1	77	CL-47	HB-8	380	82×58	1	-	1	_	-	-
AF 20 mm/2.8 D	9/12	94°	22	0,25	1/8.3	62	CL-30S	HB-4	270	69×42,5	1	-	1	-	-	-
AF 24 mm/2.8 D	9/9	84°	22	0,3	1/8.9	52	CL-30S	HN-1	270	64,5×46	1	-	1	-	-	-
AF 28 mm/1.4 D	8/11	74°	16	0,35	1/8.3	72	CL-44	HK-7	520	75×77,5	1	-	1	-	-	-
AF 28 mm/2.8 D	6/6	74°	22	0,25	1/5.6	52	CL-30S	HN-2	205	65×44,5	1	-	1	-	-	-
AF 35 mm/2 D	5/6	62°	22	0,25	1/4.2	52	CL-30S	HN-3	205	64,5×43,5	1	-	1	-	-	-
Normal/Normali															-	
AF 50 mm/1.4 D	6/7	46°	16	0,45	1/6.8	52	CL-30S	HR-2	230	64,5×42,5	3	_	3	_	_	_
AF 50 mm/1.8	5/6	46°	22	0,45	1/6.6	52	CL-30S	HR-2	160	63×39	1	_		_	_	_
Telephoto/Teleobiet											-		-			
AF 85 mm/1.4 D IF	8/9	28°30′	16	0,85	1/8.8	77	CL-44	HN-31	550	80×72,5	1	_	1	_		
AF 85 mm/1.8 D	6/6	28°30′	16	0,85	1/9.2	62	CL-44 CL-15S	HN-31 HN-23	380	71,5×58,5	1	_	5	_	_	_
AF 05 1111/1.8 D AF DC 105 mm/2 D		28 30 23°20'	16			72	CL-133		640	79×111	-	_	-			_
	6/6			0,9	1/7.7			Built-in								
AF DC 135 mm/2 D	6/7	18°	16	1,1	1/7.1	72	CL-38	Built-in	815	79×120	-	-	-	1		_
AF 180 mm/2.8 D IF-ED	6/8	13°40′	22	1,5	1/6.6	72		Built-in	760	78,5×144	4	-	4	-		_
AF 300 mm/2.8 IF-ED*1	6/8	8°10′	22	3	1/7.0	39	CT-303	Built-in, HE-6	2700	133×255	4	1	4	1		
AF-S 300 mm/2.8 D IF-EDII*1	8/11	8°10′	22	2,3	1/7.0	52	CL-300, CT-305	HK-26B	2560	124×269	-	1	-	1	2	2
AF-S 300 mm/4 D IF-ED*1	6/10	8°10′	32	1,45	1/3.7	77	CL-M2	Built-in	1440	90×222,5	-	1	-	1	2	1
AF-S 400 mm/2.8 D IF-EDII*1	9/11	6°10′	22	3,5	1/8.3	52	CT-402	HK-27B	4440	159,5×351,5	-	1	-	1	2	2
AF-S 500 mm/4 D IF-EDII*1	9/11	5°	22	4,6	1/9.0	52	CT-502	HK-28B	3230	139,5×394	-	1	-	1	-	1
AF-S 600 mm/4 D IF-EDII*1	7/10	4°10′	22	5,6	1/9.1	52	CT-605	HK-29B	4730	166×430	-	1	-	1	2	1
Special Purpose/Spe	ciali															
AF Micro 60 mm/2.8 D	7/8	39°40'	32	0,219	1	62	CL-32S	HN-22	440	70×74,5	1	-	1	-	-	-
AF Micro 105 mm/2.8 D	8/9	23°20′	32	0,314	1	52	CL-15S	HS-7	560	75×104,5	5	-	-	-	-	_
AF Micro 200 mm/4 D IF-ED*1	8/13	12°20′	32	0,5	1	62	CL-45	HN-30	1190	76×193	-	-	-	-	-	-
AF Micro 70-180 mm/4.5-5.6 D ED	*114/18	34°20'–13°40'	32	0,37	1/1.32	62	CL-71	HB-14	1010	75×167	1	-	1	-	-	-

Lens	Optical constr. (groups/ lenses)	Picture angle	Minimal Aperture	Closest Market focusing distance	Maximum Reproduction Ratio (Macro Setting)	Filter Diameter	Lens hood	Lens case	Weight (g)	Dimensions (mm)	TC- TC- TC- TC- TC- TC- 201 301 14A 14B 14EII20EII
Obiettivo	Schema ottico (gruppi/ lenti)	Angolo di campo	Apertura minima	Distanza minima di messa a fuoco	Rapporto di massima riproduzione (Selezione Macro)	Diametro ghiera portafiltri	Paraluce	Astuccio	Peso (g)	Dimensioni (mm)	TC- TC- TC- TC- TC- TC- 201 301 14A 14B 14EII 20EII
AF-S Teleconv	verter*2										
TC-14E II	5/5	-	-	-	-	-	CL-S1, CL-30S	-	200	66×24,5	
TC-20E*3 II	6/7	-	-	-	-	-	CL-S1, CL-31S	-	355	66×55	

\*1 Tripod mounting collar is provided.

\*2 Compatible with AF-S lenses except.

\*<sup>3</sup> 0.85 m (2.8 ft.) at 2.8 mm or 1.5 m (4.9 ft.) at 200 mm.

\*1 Collare per montaggio su treppiede in dotazione.

\*2 Compatibile soltanto con gli obiettivi AF-S escluso.

\*<sup>3</sup> 0,85 m a 28 mm a 1,5 m o 200 mm.

① Usable.

- Usable. Autofocusing is possible.
- ③ When used at smaller aperture than f/11 with high shutter speeds, there is occasional uneven exposure.
- Usable, but there is occasional vignetting.
  There is occasional vignetting. And when used at smaller aperture than f/11 with high shutter speeds, there is occasional uneven exposure.
- Not usable.

#### ① Impiegabile.

- ② Se impiegato con diaframmi più chiusi di f/11 e tempi rapidi, c'è il rischio di occasionali esposizioni irregolari.
- ③ Impiegabile, ma con il rischio di occasionali vignettature.
- ④ Vignettature occasionali. Se impiegato con diaframmi più chiusi di f/11 e tempi rapidi, c'è il rischio di occasionali vignettature.
- ⑤ Utilizzabile se il filtro posteriore é rimosso.
- Non impiegabile.

#### Note:

Lens hood names indicate type: HN for Screw-in, HR for Rubber Screw-in, HK for Slip-on, HS for Snap-on, and HB for Bayonet.

#### Nota:

Le designazioni dei paraluce ne indicano il tipo di attacco: HN, a vite; HR, a vite in gomma; HK, a incastro; HS, a innesto rapido; HB, a baionetta.

## Manual lenses / Obiettivi manuali

Lens	Optical constr. (groups/ lenses)	Picture angle	Minimal Aperture	Closest Market focusing distance	Maximum Reproduction Ratio (Macro Setting)	Filter Diameter	Lens hood	Lens case	Weight (g)	Dimensions (mm)					TC- TC- 14EII 20EII
Obiettivo	Schema ottico (gruppi/ lenti)	Angolo di campo	Apertura minima	Distanza minima di messa a fuoco	Rapporto di massima ripriduzione (Selezione Macro)	Diametro ghiera portafiltri	Paraluce	Astuccio	Peso (g)	Dimensioni (mm)					TC- TC- 14EII 20EII
Wideangle/Granda	ngolari														
15 mm/3.5*1	11/14	110°	22	0,3	1/12.5	Provided	CL-17	Built-in	630	90×83,5	1	-	1	-	
18 mm/3.5*1	10/11	100°	22	0,25	1/8.3	72	CL-37	HK-9	350	75×61,5	1	-	3	-	
20 mm/2.8*1	9/12	94°	22	0,25	1/8.3	62	CL-305	HK-14	260	65×42,5	1	-	1	-	
24 mm/2*1	10/11	84°	22	0,3	1/8.6	52	CL-31S	HK-2	300	63×51,5	1	-	1	-	
24 mm/2.8*1	9/9	84°	22	0,3	1/8.8	52	CL-305	HN-1	275	63×46	1	-	1	-	
28 mm/2*1	8/9	74°	22	0,25	1/5.4	52	CL-31S	HN-1	345	63×58,5	1	-	1	-	
28 mm/2.8*1	8/8	74°	22	0,2	1/3.9	52	CL-30S	HN-2	250	63×44,5	1	-	1	-	
35 mm/1.4*1	7/9	62°	16	0,3	1/5.6	52	CL-31S	HN-3	400	67,5×62	2	-	2	-	
35 mm/2	6/8	62°	22	0,3	1/5.7	52	CL-31S	HN-3	280	63×51,5	1	-	1	-	
45 mm/2.8 P	4/3	50°	22	0,45		52		HN-35	120	61,5x17	-	-	-	-	
Normal/Normali															
50 mm/1.2	6/7	46°	16	0,5	1/7.9	52	CL-31S	HS-12, HR-2	360	68,5×47,5	1	-	1	-	
50 mm/1.4	6/7	46°	16	0,45	1/6.8	52	CL-30S	HS-9, HR-1	250	63×40	2	-	2	-	
50 mm/1.8	5/6	46°	22	0,6	1/9.6	52	CL-305	HR-4, HS-11	145	63×27,5	1	-	1	-	
Telephoto/Teleobie	ettivi														
85 mm/1.4*1	5/7	28°30′	16	0,85	1/7.9	72	CL-34A	HN-20	620	80,5×64,5	2	-	2	-	
105 mm/1.8	5/5	23°20′	22	1	1/7.6	62	CL-15S	Built-in	580	78,5×80,5	2	-	2	-	

Lens	Optical constr. (groups/ lenses)	Picture angle	Minimal Aperture	Closest Market focusing distance	Maximum Reproduction Ratio (Macro Setting)	Filter Diameter	Lens hood	Lens case	Weight (g)	Dimensions (mm)				TC- TC- TC- 14b 14eii 20ei
Obiettivo	Schema ottico (gruppi/ lenti)	Angolo di campo	Apertura minima	Distanza minima di messa a fuoco	Rapporto di massima riproduzione (Selezione Macro)	Diametro ghiera portafiltri	Paraluce	Astuccio	Peso (g)	Dimensioni (mm)				TC- TC- TC- 14b 14eii 20e
105 mm/2.5	4/5	23°20′	22	1	1/7.7	52	CL-32S	Built-in	435	64×69,5	1	-	3	-
135 mm/2	4/6	18°	22	1,3	1/7.5	72	CL-15S	Built-in	860	80,5×93,5	2	-	2	-
135 mm/2.8	4/5	18°	32	1,3	1/7.5	52	CL-32S	Built-in	435	64×83,5	3	-	1	1
180 mm/2.8 ED	5/5	13°40′	32	1,8	1/7.5	72	CL-38	Built-in	800	78,5×130	2	-	2	-
200 mm/2 IF-ED*2	8/10	12°20′	22	2,5	1/9.5		CT-200	Built-in, HE-4	2550	132×225,5	2	-	4	2
300 mm/2.8 IF-ED*2	6/8	8°10′	22	3	1/8.3	39	CT-302	Built-in, HE-4	2400	132×255	3	1	3	1
400 mm/2.8 IF-ED*2	6/8	6°10′	22	4	1/8.3	52	CT-400	Built-in, HE-3	5150	163×378,5	4	2	-	2
400 mm/3.5 IF-ED*2	6/8	6°10′	22	4,5	1/9.8	122/39*4	CL-61A	Built-in	2800	134×296	-	1	3	1
500 mm/4 P IF-ED*2	6/8	5°	22	5	1/9.1	39	CT-500	HK-17	3000	138×384	-	1	-	1
600 mm/5.6 IF-ED*2	6/7	4°10'	32	5	1/7.3	39	CT-603	Built-in, HE-4	2800	132×387,5	-	1	-	1
800 mm/5.6 IF-ED*2	6/8	3°	32	8	1/9.1	52	CT-800	Built-in, HE-3	5450	163×546	-	2	-	2
Reflex/Reflexe														
500 mm/8*2	6/6	5°	-	1,5	1/2.5	82/39*4	CL-39	HN-27	840	89×109	3	-	3	5
1000 mm/11*2	5/5	2°30′	_	8	1/7.1	39	CL-29	Built-in	1900	119×233,5	3	5	-	5
Zoom														
28-85 mm/3.5-4.5	11/15	74°–28°30'	22	0,8 [0,23]	1/8.3 [1/3.4]	62	CL-335	HK-16	510	67×89	1	-	1	_
35-70 mm/3.3-4.5	7/8	62°-34°20'	22	0,5 [0,35]	1/6.7 [1/4.3]	52	CL-315	HN-2	250	63×61	1	-	1	-
35–105 mm/3.5–4.5	12/16	62°–18°	22	1,4 [0,27]	1/11.6 [1/4]	52	CL-33S	HK-11	510	64×86,5	1	-	1	_
35-200 mm/3.5-4.5	13/17	62°–12°20′	22	1,6 [0,3]	1/7 [1/4]	62	CL-13A	HK-15	740	70×119	3	-	-	_
70-210 mm/4.5-5.6	8/11	34°20'–11°50'	32	1,5	1/6	52	CL-38	HR-1	375	64×104	1	-	1	-
Special Purpose/s	peciali													
PC 28 mm/3.5	9/8	74°	22	0,30		72		HN-9	380	78x69	-	-	-	-
PC-Micro 85 mm/2.8 D*5	5/6	28°30′	45	0,39	1/2	77	CL-75	HB-2	770	83,5×109,5	-	-	-	1
Micro 55 mm/2.8*1	5/6	43°	32	0,25	1/2	52	CL-31S, CL-15S*6	HN-3	290	63,5×62	1	-	1	-
Micro 105 mm/2.8*1	9/10	23°20′	32	0,41	1/2	52	CL-33S, CL-38*7	HS-14	515	66,5×83,5	1	_	1	-
Micro 200 mm/4 IF*2	6/9	12°20′	32	0,71	1/2	52	CL-36	Built-in	800	66×172	-	1	3	1
Teleconverter														
TC-201	5/7	-	-	_	-	-	CL-30S	-	230	64,5×52	-	-	-	-
TC-301	5/5	-	-	-	-	-	CL-33S	-	325	64,5×115	_	-	-	-
TC-14A	5/5	-	-	_	-	-	CL-30S	-	145	65×25,5	_	-	-	-
TC-14B	5/5	-	-	-	-	-	CL-30S	-	165	65×34	-	-	-	-
Teleconverter	3/5	-	_	_	-	_	Nr. 61	-	200	65,4×56	_	_	_	_

- \*2 Tripod mounting collar is provided.
- \*3 Manual-type diaphragm with preset ring.
- \*4 Front filter / rear filter.
- \*5 The camera's exposure metering and flash control system do not work properly when shifting and/or tilting the lens, or when using an aperture other than the maximum aperture. Shifting and/or tilting the lens to a large degree can cause some vignetting.
  - This lens cannot be used with the Nikon PRONEA S camera.
- \*6 With a PK-13 ring.
- \*7 With a PN-11 ring.
- \*1 Con sistema CRC per la correzione alle brevi diestanze.
- \*2 Collare per montaggio su trepiede in dotazione.
- \*<sup>3</sup> Diaframma manuale con anello di preselezione.
- \*4 Filtro anteriore/Filtro posteriore.
- \*5 I sistemi di misurazione esposimetrica e di controllo flash della fotocamera non lavorano correttamente con l'obiettivo decentrato e/o basculato, o quando si fa uso di un'apertura di diaframma gine a vignettature. Questo obiettivo non è utilizzabile con la fotocamera Nikon Pronea S. \*6 Con anello PK-13. diversa da quella massima. Ampi movimenti di basculaggio e/o decentramento possono dare ori-
- \*7 Con anello PN-11 ring.

- ② When used at smaller aperture than f/11 with high shutter speeds, there is occasional uneven exposure.
- ③ Usable, but there is occasional vignetting.
- ④ There is occasional vignetting. And when used at smaller aperture than f/11 with high shutter speeds, there is occasional uneven exposure.
- ⑤ Usable if the rear screw-in filter is removed.
- Not usable.
- 1 Impiegabile.
- ② Se impiegato con diaframmi più chiusi di f/11 e tempi rapidi, c'è il rischio di occasionali esposizioni irregolari.
- ③ Impiegabile, ma con il rischio di occasionali vignettature.
- ④ Vignettature occasionali. Se impiegato con diaframmi più chiusi di f/11 e tempi rapidi, c'è il rischio di occasionali vignettature.
- ⑤ Utilizzabile se il filtro posteriore é rimosso.
- Non impiegabile.

## AF Nikkor Fisheye 16 mm f/2.8 D

JAA626DA

Order code Focal length Maximum aperture ratio Picture angle Minimum distance Aperture range Diaphragm type Filter mount Lens hood Special characteristics

16 mm 1:2.8 180° Optical construction 8 elements in 5 groups 0.25 m 2.8-22 automatic bayonet mount built-in Autofocus with all Nikon AFcameras, compatible with all Al-cameras in manual mode; locking of smallest aperture 63 mm Ø × 68 mm 290 g

Dimensions Weight

#### Supplied with:

Front lens cover FA-84 Rear lens cover LF-1 4 Bayonet filters: L37C, O56, A2, B2 Filter bag CA-2

#### Accessories:

Hard case CL-31S Soft case CL-S1

## AF Nikkor 14 mm f/2.8 D ED

JAA626DA Order code Focal length Maximum aperture ratio Picture angle Optical construction 14 elements in 12 groups Minimum distance Aperture range Diaphragm type Lens hood Special characteristics

Dimensions Weight

#### Supplied with: Front lens cover

Rear lens cover LF-1

Accessories: Hard case CL-31S Soft case CL-S1

14 mm 1:2.8 114° 0.2 m 2.8-22 automatic built-in Autofocus with all Nikon AFcameras, compatible with all Al-cameras in manual mode; locking of smallest aperture 87 mm Ø × 86.5 mm 670 q





## AF Nikkor 18 mm f/2.8D

Order code	JAA126DA
Focal length	18 mm
Maximum	
aperture ratio	1:2.8
Picture angle	100°
<b>Optical construction</b>	13 element
	(with asphe

Minimum distance Aperture range Diaphragm type Filter mount Special characteristics

Dimensions Weight

#### Supplied with:

Front lens cover FA-47 Rear lens cover LF-1

#### Accessories:

Lens hood HB-8 Hard case CL- 47 Soft case CL-S1

## AF Nikkor 20 mm f/2.8 D

Order code JAA127DA Focal length 20 mm Maximum aperture ratio 1:2.8 Picture angle 94° Optical construction 12 elements in 9 groups Minimum distance 0.25 m 2.8-22 Aperture range Diaphragm type automatic Filter mount  $62 \text{ mm} \emptyset$ Special Autofocus with all Nikon AFcameras, compatible with all characteristics Al-cameras in manual mode; locking of smallest aperture Dimensions 69 mm  $\varnothing$  imes 52 mm

270 q

Dimension: Weight

Supplied with:

Front lens cover FA-85 Rear lens cover LF-1

Accessories:

Lens hood HB-4 Hard case CL-30S Soft case FLC-61 62-mm-filters 18 mm 1:2.8 100° 13 elements in 10 groups (with aspherical lens) 0.25 m 2.8–22 automatic 77 mm  $\oslash$ Autofocus with all Nikon AFcameras, compatible with all Al-cameras in manual mode; locking of smallest aperture 82 mm  $\oslash$  × 58 mm 380 g





## AF Nikkor 24 mm f/2.8 D

JAA125DA 24 mm 1:2.8 84°

0.30 m

2.8-22 automatic

270 q

52 mm  $\emptyset$ 

9 elements in 9 groups

Autofocus with all Nikon AF-

cameras, compatible with all Al-cameras in manual mode;

locking of smallest aperture  $64.5 \text{ mm} \varnothing \times 46 \text{ mm}$ 

Order code
Focal length
Maximum
aperture ratio
Picture angle
Optical construction
Minimum distance
Aperture range
Diaphragm type
Filter mount
Special
characteristics

Dimensions Weight

Supplied with: Front lens cover FA-46 Rear lens cover LF-1

Accessories: Lens hood HN-1 Hard case CL-30S Soft case CL-S1 52-mm-filters

## AF Nikkor 28 mm f/1.4 D

Order code Focal length Maximum aperture ratio Picture angle Minimum distance

Aperture range Diaphragm type Filter mount Special characteristics

Dimensions Weight

Supplied with: Front lens cover FA-51 Rear lens cover LF-1

Accessories: Lens hood HK-7 Hard case CL-44 Soft case FLC-S2 72-mm-filters

JAA124DA 28 mm 1:1.4 74° Optical construction 11 elements in 8 groups (with aspherical lens) 0.35 m 1.4-16 automatic 72 mm  $\emptyset$ Autofocus with all Nikon AFcameras, compatible with all Al-cameras in manual mode; locking of smallest aperture 75 mm Ø × 77.5 mm 565 q





## AF Nikkor 28 mm f/2.8 D

JAA128DA 28 mm 1:2.8 74°

0.30 m 2.8–22

automatic

52 mm  $\emptyset$ 

195 g

5 elements in 5 groups

Autofocus with all Nikon AFcameras, compatible with all Al-cameras in manual mode;

locking of smallest aperture 64.5 mm  $\varnothing$  × 39 mm

Order code
Focal length
Maximum
aperture ratio
Picture angle
Optical construction
Minimum distance
Aperture range
Diaphragm type
Filter mount
Special
characteristics

Dimensions Weight

Supplied with: Front lens cover FA-46 Rear lens cover LF-1

Accessories: Lens hood HN-2 Hard case CL-30S Soft case CL-S1 52-mm-filters

## AF Nikkor 35 mm f/2.0 D

JAA129DA

35 mm

1:2.0

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragm type Filter mount Special characteristics

62° 6 elements in 5 groups 0.25 m 2.0–22 automatic 52 mm ∅ Autofocus with all Nikon AFcameras, compatible with all AI-cameras in manual mode; locking of smallest aperture 64,5 mm ∅ × 43,5 mm 205 q

Dimensions Weight

Supplied with: Front lens cover FA-46 Rear lens cover LF-1

Accessories: Lens hood HN-3 Hard case CL-30S Soft case FLC-61 52-mm-⊘ filters





## AF Nikkor 50 mm f/1.4 D

JAA011DB

7 lenses in 6 groups

Autofocus with all Nikon AF-

cameras, compatible with all

Al-cameras in manual mode; locking of smallest aperture

64,5 mm Ø × 42,5 mm

50 mm

1:1.4 46°

0.45 m 1.4–16

automatic

52 mm  $\emptyset$ 

225 g

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragme type Filter mount Special characteristics

Dimensions Weight

#### Supplied with:

Front lens cover FA-46 Rear lens cover LF-1

#### Accessories:

Lens hood HR-2 Hard case CL-30S Soft case CL-S1 52 mm ∅ filters

## AF Nikkor 50 mm f/1.8

JAA009AD

50 mm

1:1.8

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragme type Filter mount Special characteristics

46° 6 lenses in 5 groups 0.45 m 1.8–22 automatic 52 m ∅ Autofocus with all Nikon AFcameras, compatible with all AI-cameras in manual mode; locking of smallest aperture 65 mm ∅ × 39 mm 155 g

Dimensions Weight

#### Supplied with:

Front lens cover FA-46 Rear lens cover LF-1

Accessories: Lens hood HR-2

Hard case CL-30S Soft case CL-S1 52 mm Ø filters





## AF Nikkor 85 mm f/1.4 D

JAA332DA

9 lenses in 8 groups

Autofocus with all Nikon AF-

cameras, compatible with all

Al-cameras in manual mode; locking of smallest aperture

 $80 \text{ mm} \varnothing \times 72,5 \text{ mm}$ 

85 mm

1:1.4 28°30'

0.85 m 1.4–16

automatic

 $77 \,\mathrm{mm}\,arnothing$ 

560 g

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragm type Filter mount Special characteristics

Dimensions Weight

#### Supplied with:

Lens hood HN-31 Front lens cover FA-47 Rear lens cover LF-1

#### Accessories:

Hard case CL-44 Soft case CL-S2 77 mm Ø filters Teleconverter TC-201 Teleconverter TC-14A

## AF Nikkor 85 mm f/1.8 D

IAA328DA

85 mm

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragm type Filter mount Special characteristics

Dimensions Weight

Supplied with: Lens hood HN-23 Front lens cover FA-85 Rear lens cover LF-1

Accessories: Hard case CL-15S Soft case CL-52 62 mm Ø filters Teleconverter TC-201 Teleconverter TC-14A 1:1.8 28°30′ 6 lenses in 6 groups 0.85 m 1.8–16 automatic 62 mm ∅ Autofocus with all Nikon AFcameras, compatible with all AI-cameras in manual mode; locking of smallest aperture 71,5 mm ∅ × 58,5 mm 375 q





## AF DC Nikkor 105 mm f/2.0 D

JAA327DA

105 mm

Order code Focal length Maximum aperture ratio Picture angle

Minimum distance Aperture range Diaphragm type Filter mount Special characteristics

1:2.0 23° Optical construction 6 elements in 6 groups plus built-in dust proof glas 0.9 m 2-16 Automatic diaphragm 72 mm the Defocus-Image Control systems enables you to defocus the back- or the foreground in a controlled, softened manner, the degree of wich you can determine yourself. Autofocus with all Nikon AF-cameras. compatible with all AI-cameras in manual mode; locking of smallest aperture  $79 \text{ mm} \odot \times 111 \text{ mm}$ 640 q

Dimensions Weight

Supplied with: Front lens cover FA-51 Rear lens cover LF-1

Accessories: Hard case CL-38 Soft case CL-S4 72 mm ∅ filters

## AF DC-Nikkor 135 mm f/2.0 D

JAA329DA

135 mm

Order code Focal length Maximum aperture ratio Picture angle Optical construction

Minimum distance Aperture range . Diaphragm type Filter mount Lens hood Special characteristics

1:2.0 18° 7 elements in 6 groups, plus built-in dust proof glas front plate 1.10 m 2.0-16 automatic 72 mm Ø built-in the Defocus-Image-Control system enables you to defocus the back- or the foreground in a controlled, softened manner, the degree of which you can determine vourself. Autofocus with all Nikon AF-cameras, compatible with all AI-cameras in manual mode; locking of smallest aperture  $79 \text{ mm} \varnothing \times 120 \text{ mm}$ 815 q

Dimensions Weight

Supplied with: Front lens cover FA-51 Rear lens cover LF-1

Accessories: Hard case CL-38 Soft case CL-S4 72 mm ∅ filters





## AF Nikkor 180 mm f/2.8 D IF-ED

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragm type Filter mount Lens hood Special characteristics

Dimensions Weight

#### Supplied with:

Front lens cover FA-51 Rear lens cover LF-1

#### Accessories:

Hard case CL-38 Soft case CL-S4 72 mm  $\oslash$  filters

## AF-S Nikkor 300 mm f/2.8 D IF-ED II

Order code JAA335DA black JAA335DB grey 300 mm Focal length Maximum aperture ratio 1:2.8 8°10' Picture angle Optical construction 11 elements in 8 groups Minimum distance 2.30 m Aperture range 2.8-22 Diaphragm type automatic slip-in glass filter holder ac-Filter mount cepts 52 mm screw-in filters; gelatine filter holder accepts gelatine filters; dustproof glass plate built-in into front Tripod socket rotatable, 360° M: manual focus (for all Nikon Special characteristics AI cameras) A: ultra-fast auto focus with built-in coreless motor (for Nikon F5/F4 and F90 models) M/A: autofocus with switch on lens for immediate manual focusing limitation of AF range; four lens-mounted buttons for focus memory Dimensions 124 mm Ø × 268.5 mm Weight 2560 g

Supplied with:

Lens hood HK-26 Soft case CL1-L1 Front lens cap Rear lens cover LF-1 Gelatine filterholder Neck strap LN-1

Accessories: Teleconverter TC 14 EII, TC 20 EII



8 lenses in 6 groups 1.50 m 2.8-22 automatic  $72 \text{ mm} \emptyset$ built-in Autofocus with all Nikon AFcameras, compatible with all Al-cameras in manual mode; locking of smallest aperture 78,5 mm Ø × 144 mm 750 g





JAA330DA 180 mm 1:2.8

## AF-S Nikkor 300 mm f/4.0 D IF-ED

Order code	JAA334DA
Focal length	300 mm
Maximum	
aperture ratio	1:4.0
Picture angle	8°10′
Optical construction	10 elements in 6 groups
•••••••••••••••••••••••••••••••••••••••	(two lenses ED-glasses)
Minimum distance	1.45 m
Aperture range	2.8–22
Diaphragm type	automatic
Filter mount	slip-in glass filter holder ac-
Filler mount	1 5
	cepts 52 mm screw-in filters;
	gelatine filter holder accepts
	gelatine filters; dustproof glass
	plate built-in into front
Tripod socket	rotatable, 360°
Special	M: manual focus (for all Nikon
characteristics	Al cameras)
	A: ultra-fast auto focus with
	built-in coreless motor (for
	Nikon F5/F4 and F90 models)
	M/A: autofocus with switch
	on lens for immediate manual
	focusing limitation of AF range;
	four lens-mounted buttons for
Dimensions	focus memory 90 mm $\varnothing \times 222.5$ mm
2	
Weight	1440 g

Supplied with:

Front lens cap Rear lens cover LF1

Accessories: Teleconverter TC-14E II and TC-20E II

## AF-I Nikkor 400 mm f/2.8 D IF-ED

Order code JAA525DA Focal length 400 mm Maximum aperture ratio 1:2.8 6°10' Picture angle Optical construction 10 elements in 7 groups Minimum distance 3.3 m Aperture range 2.8-22 Diaphragm type automatic Filter mount slip-in glass filter holder accepts 52 mm screw-in filters; gelatine filter holder accepts gelatine filters; dustproof glass plate built-in into front Tripod socket rotatable, 360° Special M: manual focus (for all Nikon characteristics AI cameras) A: ultra-fast auto focus with built-in coreless motor (for Nikon F5/F4 and F90 models) M/A: autofocus with switch on lens for immediate manual focusing limitation of AF range; four lens-mounted buttons for focus memory Dimensions 159.5 mm Ø × 351.5 mm 4440 g Weight

Supplied with: Metal case Frontlens cap, Rear lens cover LF1 Lens hood HK-27, Gelatine filterholder

Accessories: Teleconverter TC-14E and TC-20E





## AF-S Nikkor 500 mm f/4.0 D IF-ED

Order code	JAA526DA
Focal length	500 mm
Maximum aperture	
ratio	1:4.0
Picture angle	5°
Optical construction	5
optical construction	11 elements in 9 groups
	(3 elements ED)
Minimum distance	4.6 m
Aperture range	4–22
Diaphragm type	Automatic diaphragm
Filter mount	Special filter holder 52 mm,
	UV-Filter built-in
Trip socket	Rotatable 360°
Special	Focusing:
characteristics	M: manual setting (possible
	with AI cameras)
	A: ultra-fast autofocus with
	built-in Silent-Wave motor
	Suite in Sherie Mare motor
	(with F5, F100, F80 and D1 series)
	M/A: autofocus with optional
	manual setting
Dimensions	139.5 mm $\varnothing \times 394$ mm
Weight	3230 g



Supplied with:

Suitcase metal Front lens cap Rear lens cover LF-1 Lens hood HK-28 Filter holder

Accessories: Teleconverter TC-14E II and TC-20E II

## AF-S Nikkor 600 mm f/4.0 D IF-ED

Order code Focal length Maximum aperture ratio Picture angle

Minimum distance Aperture range Diaphragm type Filter mount

Trip socket Special characteristics

Dimensions Weight

Supplied with: Suitcase metal

Front lens cap Rear lens cover LF-1 Lens hood HK-29

Accessories: Teleconverter TC-14E II Teleconverter TC-20E II

JAA527DA 600 mm 1:4.0 4°10' Optical construction 10 elements in 7 groups (3 elements ED) 5.6 m 4–22 Automatic diaphragm Special filter holder 52 mm, UV-Filter built-in Rotatable 360° Focusing: M: manual setting (possible with AI cameras) A: ultra-fast autofocus with built-in Silent-Wave motor (with F5, F100, F80 and D1 series) M/A: autofocus with optional manual setting 166 mm  $\varnothing \times$  430 mm 4730 g



## AF-S Zoom-Nikkor 17–35 mm f/2.8 D IF-ED

JAA770DA

Order code
Focal length
Maximum
aperture ratio
Picture angle
Optical
construction
Minimum distance
Aperture range
Diaphragm type
Filter mount
Special
characteristics

17–35 mm 1:2.8 104°-62° 13 elements in 11 groupes 0.28 m 2.8-22 automatic 77 mm  $\emptyset$ Focusing: M: manual setting (possible with AI cameras) A: ultra-fast autofocus with built-in Silent-Wave motor (with F5, F100, F80 and D1 series) M/A: autofocus with optional manual setting  $83 \text{ mm} \varnothing \times 106 \text{ mm}$ 745 q

Dimensions Weight

Supplied with: Front lens cover FA-47 Rear lens cover LF-1 Lens hood HB-23

Accessories: Hard case CL-76 Soft case CL-S3 77 mm ∅ filters

#### AF Zoom-Nikkor 18–35 mm f/3.5–4.5D IF-ED

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragm type Filter mount Special characteristics

Dimensions

JAA772DA 18–35 mm 1:3.5–4.5

100°-62°

370 q

11 elements in 8 groupes 0.33 m 3.5–22 automatic 77 mm Ø Autofocus with all Nikon AFcameras, compatible with all AI-cameras in manual mode; locking of smallest aperture 82.5 mm Ø × 82.5mm

Dimensions Weight

#### Supplied with:

Front lens cover FA-47 Rear lens cover LF-1 Lens hood HB-23

Accessories: Hard case CL-S2 Soft case CL-S2 77 mm ∅ filters





#### AF Zoom-Nikkor 24-50 mm f/3.3-4.5 D

JAA756DA 24–50 mm 1:3.3-4.5 84°-46°

9 single elements 0.60 m,

3.3-22

365 g

automatic

62 mm  $\emptyset$ 

with macro setting 0.50 m

Autofocus with all Nikon AFcameras, compatible with all

Al-cameras in manual mode; locking of smallest aperture 67.5 mm Ø × 74.1 mm

Order code
Focal length
Maximum
aperture ratio
Picture angle
Optical
construction
Minimum distance

Aperture range Diaphragm type Filter mount Special characteristics

Dimensions Weight

#### Supplied with:

Front lens cover FA-85 Rear lens cover LF-1

#### Accessories:

Lens hood HB-3 Hard case CL-32S Soft case CL-S2 62 mm ∅ filters

### AF Zoom-Nikkor 24-85 mm f/2.8-4.0 D IF

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance

Aperture range Diaphragm type

Filter mount

characteristics

Special

JAA774DA 24-85 mm 1:2.8-4.0 84°-28°30'

0.21 m, with macro setting Autofocus with all Nikon AFcameras, compatible with all Al-cameras in manual mode; locking of smallest aperture

Dimensions Weight

#### Supplied with:

Front lens cover FA-51 Rear lens cover LF-1

#### Accessories:

Lens hood HB-25 Hard case CL-32S Soft case CL-S2 72 mm  $\oslash$  filters

5 15 Niko Nikko 50mm D 15 22 16 11 8 5.6 3.3



15 lenses in 11 groups 0.5 m 2.8-22 automatic 72 mm  $\emptyset$ 

78.5 mm Ø × 82.5 mm

545 a

#### AF Zoom-Nikkor 24–120 mm f/3.5–5.6 D IF

JAA757DA

1:3.5-5.6

0.50 m

3.5-22

automatic

72 mm  $\emptyset$ 

555 α

84°-20°30'

15 elements in 11 groups

Autofocus with all Nikon AF-

cameras, compatible with all Al-cameras in manual mode; locking of smallest aperture

 $79 \text{ mm} \odot \times 80 \text{ mm}$ 

24–120 mm

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragm type Filter mount Special characteristics

Dimensions Weight

#### Supplied with:

Front lens cover FA-51 Rear lens cover LF-1

#### Accessories:

Lens hood HB-11 Hard case CL-49 Soft case CL-S2 72 mm Ø filters

## AF-S Zoom-Nikkor 28–70 mm f/2.8 D IF-ED

JAA767DA

28-70 mm

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragm type Filter mount Special characteristics

1:2.8 74°-34°20' 15 elements in 11 groups (with aspherical lens) 0.70 m 2.8-22 automatic 77 mm  $\varnothing$ Focusina: M: manual setting (possible with AI cameras) A: ultra-fast autofocus with built-in Silent-Wave motor (with F5, F100, F80 and D1 series) M/A: autofocus with optional manual setting 88.5 mm Ø × 121.5 mm 935 q

Dimensions Weight

Supplied with: Front lens cover FA-47 Rear lens cover LF1 Lens hood HB-19

Accessories: Hard case CL-74 Soft case CL-S4 77 mm ∅ filters





# AF Zoom-Nikkor 28–80 mm f/3.3–5.6 G silver/black

Focal length Maximum aperture ratio Picture angle Optical construction 6 elements in 6 groups Minimum distance Diaphragm scale Filter mount Special characteristics

Order code

JAA777DA silver JAA777DC black 28–80 mm

1:3.3-5.6 74°-30° 10' 0.35 m automatic  $58 \,\mathrm{mm}\, arnothing$ G-type lenses without aperture ring; aperture is camera-controlled at all times. Compatible with all aperture types of F5, F100, F80, F65, F50, F401, Pronea 600i, Pronea S and D1 series. Usable with F4, F90/90X, F70, F801 and F601 M in P and S mode 66.5 mm  $\varnothing$  × 64 mm 195 g

Dimensions Weight

Supplied with: Front lens cover FA-45 Rear lens cover LF-1

Accessories: Lens hood HB-20 58 mm  $\oslash$  filters



#### AF Zoom-Nikkor 28-105 mm f/3.5-4.5 D IF

JAA766DA

1:3.5-4.5 74°-23°20'

0.5 m,

3.5-22

automatic

 $62 \text{ mm} \emptyset$ 

455 q

in macro position 0.22 m

Autofocus with all Nikon AF-

cameras, compatible with all

Al-cameras in manual mode; locking of smallest aperture

73 mm  $\varnothing$  × 81.5 mm

28–105 mm

Order code Focal length Maximum aperture ratio Picture angel Optical construction 16 elements in 12 groups Minimum distance

Aperture range Diaphragm type Filter mount Special characteristics

Dimensions Weight

#### Supplied:

Front lens cover FA-85 Rear lens cover LF-1

#### Accessories:

Lens hood HB-18 Hard case CL-49 Soft case CL-S2 62 mm ∅ filters

## AF Zoom-Nikkor 28-200 mm f/3.5-5.6 D IF

JAA758DA

28-200 mm

Order code Focal length Maximum aperture ratio Picture angel Minimum distance Aperture range Diaphragm type Filter mount Special characteristics

1:3.5-5.6 74°-12°20' Optical construction 16 elements in 13 groups 2 m, in macro position 0.85 m 3.5-22 automatic 72 mm  $\emptyset$ Autofocus with all Nikon AFcameras, compatible with all Al-cameras in manual mode; locking of smallest aperture 78 mm Ø × 86.5 mm 555 q

Dimensions Weight

#### Supplied:

Front lens cover FA-47 Rear lens cover LF-1 Lens hood HB-12

Accessories: Hard case CL-49 Soft case CL-S4 72 mm ∅ filters

o 2 1<sup>3</sup> 0.7<sup>2</sup> 0.5 105 mm 50 28 22 16 11 8 5.6 3.5





## AF Zoom Nikkor 35–70 mm f/2.8 D

Order code
Focal length
Maximum
aperture ratio
Picture angle
Optical
construction
Minimum distance

Aperture range Diaphragm type Filter mount Special characteristics

Dimensions Weight

#### Supplied with:

Front lens cover FA-85 Rear lens cover LF1

#### Accessories:

Lens hood HB-1 Hard case CL-33S Soft case CL-S3 62 mm ∅ filters

## AF Zoom-Nikkor 70-300 mm f/4.0-5.6 D ED

JAA764DA

1:4.0-5.6 34°20'-8°10'

1.50 m

4.0-32

515 g

automatic

62 mm Ø

Autofocus with all Nikon AF-

cameras, compatible with all Al-cameras in manual mode; locking of smallest aperture

 $74 \text{ mm} \emptyset \times 116 \text{ mm}$ 

75-300 mm

Order code Focal length Maximum aperture ratio Picture angel Optical construction 13 elements in 9 groups Minimum distance Aperture range . Diaphragm type Filter mount Special characteristics

Dimensions Weight

#### Supplied:

Front lens cover FA-85 Rear lens cover LF-1 Lens hood HN-15

Accessories: Lens hood CI-72 Soft case CL-S4 62 mm  $\oslash$  filters

JAA743DA 35–70 mm

1.28 62°-34°20'

665 g

15 elements in 12 groups 0.6 m, in macro position 0.28 m 2.8-22 automatic 62 mm  $\emptyset$ autofocus with all Nikon AFcameras, compatible with all Al-cameras in manual mode; locking of smallest aperture 71.5 mm Ø × 94.5 mm





#### AF Zoom-Nikkor 70-300 mm f/4.0-5.6 G silver/black

Focal length Maximum aperture ratio Picture angle Minimum distance Aperture range Diaphragm scale Filter mount Special characteristics

Order code

JAA776DA silver JAA776DC black 70-300 mm

1:4.0-5.6 34°20'-8°10' Optical construction 13 elements in 9 groups 1.5 m 4.0-22 automatic  $62 \text{ mm} \emptyset$ G-type lenses without aperture ring; aperture is camera-controlled at all times. Compatible with all aperture types of F5, F100, F80, F65, F50, F401, Pronea 600i, Pronea S and D1 series. Usable with F4, F90/90X, F70, F801 and F601M in P and S mode 74 mm  $\varnothing$  × 116.5 mm 470 a

Dimensions Weight

Supplied with: Front lens cover FA-85 Rear lens cover LF-1

Accessories: Lens hood HB-26 Lens case CL-72 Soft case CL-S4 62 mm ∅ filters

#### AF Zoom-Nikkor 80-200 mm f/2.8 D ED

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragm type Filter mount Tripod socket Special characteristics

Dimensions Weight

Supplied with: Front lens cover FA-47 Rear lens cover LF1 Hard case CL-43A

Accessories: Lens hood HB-7 Soft case CL-S3 77 mm ∅ filters JAA762DA 80-200 mm

1:2.8 30°10'-12°20'

16 elements in 11 groups 1.80 m, in macro position 1.50 m 2.8-22 automatic 77 mm  $\emptyset$ built-in, rotatable Autofocus with all Nikon AFcameras, compatible with all AIcameras in manual mode; locking of smallest aperture. The focus response time can be shortened by presetting the focus range  $87 \text{ mm} \varnothing \times 187 \text{ mm}$ 1300 g





#### AF-S Zoom-Nikkor 80–200 mm f/2.8 D IF-ED

Order code
Focal length
Maximum
aperture ratio
Picture angle
Optical
construction
Minimum distance
Aperture range
Diaphragm type
Filter mount
Special
characteristics

JAA765DA 80–200 mm

1:2.8 30°10'–12°20'

18 elements in 14 groups 1.5 m 2.8–22 automatic 77 mm ∅ Focusing: M: manual setting (possible with Al cameras) A: ultra-fast autofocus with built-in Silent-Wave motor (with F5, F100, F80 and D1 series) M/A: autofocus with optional manual setting 88 mm ∅ × 207 mm 1580 g

Dimensions Weight

Supplied with: Front lens cover FA-47 Rear lens cover LF1

Accessories: Lens hood HB-7 Hard case CL-43A 77 mm Ø filters

## AF-VR Zoom-Nikkor 80–400 mm f/4.5–5.6 D ED

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragm type Filter mount Special characteristics JAA771DA 80–200 mm

1:4.5–5.6 30°10'–6°10'

17 lenses in 11 groups 2.3 m 4.5-32 automatic 77 mm  $\emptyset$ New-style system called VR is a special vibration reduction mechanism; allows to take pictures at shutter speeds approx. 3 steps slower than using a lens without VR and still get sharp results; the VR system works only with the F5, F100, F80 and D1 serie 91 mm  $\varnothing$  × 171 mm 1360 g

Dimensions Weight

Supplied with: Front lens cover FA-47 Rear lens cover LF-1

Accessories: Lens hood HB-24 Hard case CL-15S 77 mm ∅ filters





## AF Micro Nikkor 60 mm f/2.8 D

Order code Focal length Maximum aperture ratio Picture angle Optical constructio Minimum distance Maximum reproduction ratio Aperture range Diaphragm type Filter mount Special characteristics

 Order code
 JAA625DA

 Focal length
 60 mm

 Maximum
 1:2.8

 aperture ratio
 1:3.9°40'

 Optical construction
 8 elements in 7 groups

 Minimum distance
 0.219 m

bis 1:1 2.8–32 automatic 62 mm  $\oslash$ Autofocus with all Nikon AFcameras, compatible with all AI-cameras in manual mode; locking of smallest aperture 70 mm  $\oslash$  × 74.5 mm 440 q

Supplied with:

Front lens cover FA-85 Rear lens cover LF-1

#### Accessories:

Dimensions

Weight

Lens hood HN-22 Hard case CL-32S Macroflash SB-29 Adapter URF-3 for macro flash Unit SB-29 62 mm Ø filters

## AF Micro-Nikkor 105 mm f/2.8 D

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Maximum reproduction ratio Aperture range Diaphragm type Filter mount Special characteristics

 Order code
 JAA6727DA

 Focal length
 105 mm

 Maximum
 12.8

 aperture ratio
 1:2.8

 Picture angle
 23°20'

 Optical construction
 9 elements in 8 groups

 Minimum distance
 0.314 m

1:1 2.8–32 automatic 52 mm  $\oslash$ Autofocus with all Nikon AFcameras, compatible with all Al-cameras in manual mode; locking of smallest aperture 75 mm  $\oslash$  × 113 mm 560 q

Dimensions Weight

#### Supplied with:

Front lens cover FA-46 Rear lens cover LF-1

Accessories:

Lens hood HS-7 Hard case CL-15S 52 mm ⊘ filters Macroflash SB-29 Adapter URF-3 for SB-29





#### AF Micro Nikkor 200 mm f/4.0 D IF-ED

Order code Focal length Maximum aperture ratio Picture angle Minimum distance Maximum reproduction ratio Aperture range Diaphragm type Filter mount Special characteristics

JAA624DA 200 mm

1:1

1:4.0 12°20' Optical construction 13 elements in 8 groups 0.5 m

> 4.0-32 automatic 62 mm Ø Autofocus with all Nikon AFcameras, compatible with all Al-cameras in manual mode: locking of smallest aperture. The focus response time can be shortened by presetting the focus range rotable 360° 76 mm  $\varnothing \times$  193 mm 1200 g

Tripod socket Dimension Weight

#### Supplied with:

Front lens cover FA-46 Rear lens cover LF-1 Hard case CL-45

Accessories: Lens hood HN-30 62 mm ∅ filters

### AF Zoom-Micro-Nikkor 70-180 mm f/4.5-5.6 D ED

Order code Focal length Maximum aperture ratio Picture angle Minimum distance Maximum reproduction ratio Aperture range Diaphragm type Filter mount Special characteristics

JAA763DA 70-180 mm

1:1

1:4.5-5-6 34°20'-13°40' Optical construction 18 elements in 14 groups 0.37 m

4.5–32 automatic  $62 \text{ mm} \emptyset$ Autofocus with all Nikon AFcameras, compatible with all Al-cameras in manual mode: locking of smallest aperture. The focus response time can be shortened by presetting the focus range 75 mm Ø × 167 mm 990 q

Dimension Weight

Supplied with:

Front lens cover FA-46 Rear lens cover LF-1 Lens hood HB-14

Accessories: Hard case CL-71 62 mm Ø filters





## AF-S Teleconverter TC-14E II

JAA910DA

with all AF-S lenses

Order code Use

Closest focusing distance

Mount-tomount length

Dimensions Weight

Focale length . Diaphragm type Aperture coupling range Effective aperture Reproduction ratio Depth of field

1.4× that of the lens in use **Optical construction** 5 elements in 5 groups automatic 2-32

(lenses with built-in motor)

2.8-45  $1.4 \times$  that of the lens in use about 70% of that of lens in use

same as that of lens in use

24.5 mm 66 mm  $\varnothing$  × 24.5 mm 200 g

#### Supplied with:

Front lens cover BF-3 Rear lens cover LF-1

#### Accessories:

Lens case CL-30S Soft case CL-S1

## AF-S Teleconverter TC-20 E II

Order code Use Focale length

Aperture

Closest focusing distance

Weight

Mount-tomount length

Dimensions

Diaphragm type

coupling range

Depth of field

Effective aperture

Reproduction ratio

JAA911DA with all AF-S lenses (lenses with built-in motor)  $2 \times$  that of the lens in use Optical construction 7 elements in 6 groups automatic

> 2-32 4.0-64  $2 \times$  that of the lens in use half that of the lens in use

same as that of lens in use

55 mm  $66 \text{ mm} \varnothing \times 55 \text{ mm}$ 355 q

#### Supplied with:

Front lens cover BF-3 Rear lens cover LF-1

Accessories: Lens case CL-30S Soft case CL-S1





## Nikkor 15 mm f/3.5

Order code Focal length Maximum aperture ratio Picture angle Optical construction Special characteristic Minimum distance Aperture range Diaphragm type Filter mount

Lens hood Hard case Dimensions Weight

Accessories: Front cover FA 110 Rear lens cover LF 1 Hard case CL-17 JAA103AB 15 mm 1:3.5

110°

14 elements in 11 groups CRC close-range correction system 0.3 m 3.5-22Automatic Bayonet mount; 4 filters supplied: L1 BC, 056, A2, B2 Built-in Supplied CL-17 90 mm  $\oslash$  × 94 mm 630 g



## Nikkor 18 mm f/3.5

Order code JAA105AB Focal length 18 mm Maximum aperture ratio 1:3.5 Picture angle 100° Optical construction 11 elements in 10 groups Special CAC close-range correction characteristic system Minimum distance 0.25 m Aperture range 3.5-22 Diaphragm type Automatic 72 mm  $\emptyset$ Filter mount  $75 \text{ mm} \varnothing \times 61.5 \text{ mm}$ Dimensions Weight 350 q

#### Accessories:

Rear lens cover FA-51 Rear lens cover LF-1 Lens hood HK-9 Hard case CL-37


## Nikkor 20 mm f/2.8

Order code	JAA108AA
Focal length	20 mm
Maximum	
aperture ratio	1:2.8
Picture angle	94°
<b>Optical construction</b>	12 elements in 9 groups
Special characteristic	CAC close-range correction
Minimum distance	0.25 m
Aperture range	2.8–22
Diaphragm type	Automatic
Filter mount	62 mm $\varnothing$
Dimensions	65 mm $\varnothing$ × 42.5 mm
Weight	260 g

#### Supplied with: Front lens cover FA-85

Rear lens cover LE-1

#### Accessories:

Lens hood HK-14 Hard case CL-30S Soft case CL-S2 62 mm Ø filters



## Nikkor 24 mm f/2.0

Order code JAA109AB Focal length 24 mm Maximum aperture ratio 1:2.0 Picture angle 84° Optical construction 11 elements in 10 groups . Special CRC close-range correction characteristic system Minimum distance 0.3 m Aperture range 2.8-22 Diaphragm type Automatic Filter mount 52 mm  $\emptyset$ 63 mm Ø × 51.5 mm Dimensions Weight 300 g

Supplied with: Front lens cover FA 46 Rear lens cover LF 1

## Accessories:

Lens hood HN-1 Hard case CL-30S Soft case CL-S1 52 mm ∅ filters



## Nikkor 24 mm f/2.8

Order code	JAA109AB
Focal length	24 mm
Maximum	
aperture ratio	1:2.8
Picture angle	84°
<b>Optical construction</b>	9 elements in 9 groups
Special	CRC close-range correction
characteristic	system
Minimum distance	0.3 m
Aperture range	2.8–22
Diaphragm type	Automatic
Filter mount	52s mm $\varnothing$
Dimensions	63 mm $\varnothing$ × 46 mm
Weight	250 g

## Supplied with:

Front lens cover FA-46 Rear lens cover LF-1

#### Accessories:

Lens hood HN-1 Hard case CL-30S Soft case CL-S1 52 mm ∅ filters



## Nikkor 28 mm f/2.0

Order code JAA111AC Focal length 28 mm Maximum aperture ratio 1:2.0 Picture angle 74° Optical construction 9 elements in 8 groups Special CRC close-range correction characteristic system 0.25 m Minimum distance Aperture range 2.0-22 Diaphragm type Automatic Filter mount 52 mm  $\emptyset$ 63 mm Ø × 58.5 mm Dimensions Weight 360 g

#### Supplied with:

Front lens cover FA 46 Rear lens cover LF 1

#### Accessories:

Lens hood HN 1 Hard case CL 31 S Soft case FLC 61 52 mm ∅ filters



# Nikkor 28 mm f/2.8

Order code Focal length Maximum aperture ratio Picture angle Special characteristic Minimum distance Aperture range Diaphragm type Filter mount Dimensions Weight

1:2.8 74° Optical construction 8 elements in 8 groups CRC close-range correction system 0.2 m 2.8-22 Automatic diaphragm 52 mm  $\emptyset$ 63 mm Ø × 44.5 mm 250 q

JAA112AB

28 mm

## Supplied with:

Front lens cover FA 46 Rear lens cover LF 1

#### Accessories: Lens hood HN 2

Hard case CL 30 S Soft case FLC 61 52 mm  $\oslash$  filters



## Nikkor 35 mm f/1.4

Order code JAA115AD Focal length 35 mm Maximum aperture ratio 1:1.4 Picture angle 62° Optical construction 9 elements in 7 groups Special characteristic CRC close-range correction system Minimum distance 0.3 m Aperture range 1.4-16 Diaphragm type Automatic Filter mount 52 mm  $\emptyset$  $67.5 \text{ mm} \otimes \times 62 \text{ mm}$ Dimensions Weight 400 q

Supplied with: Front lens cover FA 46 Rear lens cover LF 1

#### Accessories:

Lens hood HN 3 Hard case CL 31 S Soft case FLC 61 52 mm  $\oslash$  filters



## Nikkor 35 mm f/2.0

Order code	JAA116AB
Focal length	35 mm
Maximum	
aperture ratio	1:2.0
Picture angle	62°
<b>Optical construction</b>	8 elements
Minimum distance	0.3 m
Aperture range	2.0–22
Diaphragm type	Automatic
Filter mount	52 mm $\oslash$
Dimensions	63.5 mm 🖉
Weight	280 g

35 mm 1:2.0 62° 8 elements in 6 groups 0.3 m 2.0–22 Automatic 52 mm ∅ 63.5 mm ∅ × 51.5 mm 280 g

#### Supplied with: Front lens cover FA-46 Rear lens cover LF-1

#### Accessories:

Lens hood HN-3 Hard case CL-31 S Soft case CL-S1 52 mm ⊘ filters



# Nikkor 45 mm f/2.8 P

Order code	JAA012AA silver
	JAA012AB black
Focal length	45 mm
Maximum	
aperture ratio	1:2.8
Picture angle	50°
<b>Optical construction</b>	4 elements in 3 groups
Minimum distance	0.45 m
Aperture range	2.8–22
Diaphragm type	Automatic diaphragm
Filter mount	52 mm Ø
Special	compatible with CPU
	controlled
characteristics	Nikon cameras
Dimensions	61.5 Ø × 17 mm
Weight	120 g

#### Supplied:

to FL45A silver Front lens cover FA-45A Rear lens cover LF-1P Lens hood HN-35S Soft case 52 mm- NC-filters

to FL45A black Front lens cover FA-46 Rear lens cover LF-1 Lens hood HN-35B Soft case 52 mm NC-filters



## Nikkor 50 mm f/1.2

Order code JAA003AB Focal length 50 mm Maximum aperture ratio Picture angle 46° **Optical construction** 7 elements in 6 groups Minimum distance Aperture range . Diaphragm type Filter mount Dimensions Weight

1:1.2 0.5 m 1.2-16 Automatic 52 mm  $\oslash$ 68.5 mm Ø × 47.5 mm 360 q

#### Supplied with: Front lens cover FA-46 Rear lens cover LF-1

#### Accessories:

Lens hood HS-12 Lens hood HR-2 Hard case CL-3LS Soft case CL-S1



## Nikkor 50 mm f/1.4

Order code JAA001AF Focal length 50 mm Maximum aperture ratio 1:1.4 Picture angle 46° Optical construction 7 elements in 6 groups Minimum distance 0.45 m Aperture range 1.4-16 Diaphragm type Automatic Filter mount 52 mm  $\emptyset$ Dimensions  $63 \text{ mm} \varnothing \times 40 \text{ mm}$ Weight 250 g

#### Supplied with:

Front lens cover FA-46 Rear lens cover LF-1

#### Accessories:

Lens hood HS-9 Lens hood HR-1 Hard case CL-30S Soft case CL-S1



## Nikkor 50 mm f/1.8

Order code Focal length Maximum aperture ratio Picture angle Minimum distance Aperture range Diaphragm type Filter mount Dimensions Weight

50 mm 1:1.8 46° **Optical construction** 6 elements in 5 groups 0.60 m 1.8-22 automatic 52 mm  $\varnothing$ 63.5 mm Ø × 27.5 mm 145 g

JAA006AC

#### Supplied with: Front lens cover FA-46 Rear lens cover LF-1

Accessories:

Lens hood HR-4 Hard case CL-30 S Soft case CL-61



## Nikkor 85 mm f/1.4

Order code JAA303AB Focal length 85 mm Maximum aperture ratio 1:1.4 Picture angle 28°30' Optical construction 7 elements in 5 groups . Minimum distance 0.85 m Aperture range 1.4-16 Diaphragm type Automatic Filter mount 72 mm  $\emptyset$ Dimensions  $80.5 \text{ mm} \varnothing \times 64.5 \text{ mm}$ Weight 620 g

#### Supplied with:

Front lens cover FA-51 Rear lens cover LF-1 Lens hood HN-20

#### Accessories:

Hard case CL-17 Soft case CL-S2



## Nikkor 105 mm f/1.8

Order code Focal length Maximum aperture ratio Picture angle Minimum distance Aperture range . Diaphragm type Filter mount Lens hood Dimensions Weight

105 mm 1:1.8 23°20' Optical construction 5 elements in 5 groups 1 m 1.8-22 Automatic diaphragm 62 mm  $\emptyset$ Supplied 78.5 mm ∅ × 80.5 mm 580 g

JAA306AA

#### Supplied with: Front lens cover FA-85 Rear lens cover LF-1

Accessories: Hard case CL-15 S Soft case CL-S2



## Nikkor 105 mm f/2.5

Order code JAA305AC Focal length 105 mm Maximum aperture ratio 1:2.5 Picture angle 23°20' Optical construction 5 elements in 4 groups Minimum distance 1 m Aperture range 2.5-22 Diaphragm type Automatic diaphragm 52 mm  $\oslash$ Filter mount Lens hood Supplied  $64 \text{ mm} \varnothing \times 69.5 \text{ mm}$ Dimensions Weight 435 q

#### Supplied with: Front lens cover FA-45

Rear lens cover LE-1

Accessories: Hard case CL-328 Soft case CL-S2



## Nikkor 135 mm f/2.0

Order code JAA307AC Focal length 135 mm Maximum aperture ratio 1:2.0 18° Picture angle Optical construction 6 elements in 4 groups Minimum distance 1.3 m Aperture range Diaphragm type Filter mount Lens hood Dimensions Weight

2.0-22 Automatic 72 mm  $\emptyset$ Built-in 80.5 mm Ø × 93.5 mm 860 q

#### Supplied with: Front lens cover FA-51 Rear lens cover LF-1

Accessories: Hard case CL-158 Soft case CL-S2



## Nikkor 135 mm f/2.8

Order code JAA308AB Focal length 135 mm Maximum aperture ratio 1:2.8 Picture angle 18° 5 elements in 4 groups Optical construction Minimum distance 1.3 m Diaphragm type 2.8-32 Diaphragm type Automatic Filter mount 52 mm  $\emptyset$ Lens hood Built-in Dimensions 64 mm  $\varnothing$  × 83.5 mm Weight 435 q

### Supplied with:

Front lens cover FA-46 Rear lens cover LF-1

Accessories: Hard case CL-32S Soft case CL-S2



## Nikkor 180 mm f/2.8 ED

Order code Focal length Maximum aperture ratio Picture angle Minimum distance Aperture range Diaphragm type Filter mount Lens hood Dimensions Weight

180 mm 1:2.8 13° 40′ Optical construction 5 elements in 5 groups 1.8 m 2.8–32 Automatic diaphragm 72 mm  $\varnothing$ Built-in 78.5 mm  $\varnothing$  × 130 mm 800 g

JAA311AF

#### Supplied with: Front lens cover FA-50 Rear lens cover LF-1

Accessories: Hard case CL-35 A Soft case CL-S4



## Nikkor 200 mm f/2.0 IF-ED

Order code	JAA312AC
Focal length	200 mm
Maximum	
aperture ratio	1:2.0
Picture angle	12° 20′
Optical construction	10 elements in 8 groups
Minimum distance	2.5 m
Aperture range	2.0–22
Diaphragm type	Automatic
Filter mount	Standard gelatine filter can be
	inserted; front end of lens has
	built-in UV-Filter
Lens hood	Built-in
	telescopic lens hood HE-4
Tripod socket	Provided, rotatable
Dimensions	132 mm $\varnothing$ × 225.5 mm

2550 g

#### Supplied with:

Weight

Leather lens hood Rear lens cover LF-1 Metal case CT-200



## Nikkor 400 mm f/2.8 IF-ED

JAA516AA

Order code Focal length Maximum aperture ratio Picture angle Optical construction 8 elements in 6 groups Minimum distance Aperture range Diaphragm type Filter mount

Lens hood

Tripod socket Dimensions Weight

Supplied with:

Leather lens hood Rear lens cover LF-1 Metal case CT-400

400 mm 1:2.8 6° 10' 4 m 2.8-22 Automatic 1 special holder for 52 mm filter; 1 special holder for gelatine filter; front end of lens has built-in UV-filter Built-in telescopic lens hood HE-3 Rotatable 163 mm  $\varnothing$  × 378.5 mm 5150 a



## Nikkor 400 mm f/3,5 IF-ED

JAA501AC

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragm type Filter mount

Lens hood Tripod socket Dimensions Weight

Supplied with: Front lens cover FA-51 Rear lens cover LF-1 Hard case CL-61A

400 mm 1:3.5 6° 10' 8 elements in 6 groups 4.5 m 3.5-22 Automatic 1 special holder for 39 mm filter; 1 special holder for gelatine filter; front end of lens has built-in UV-filter Built-in Rotatable, detachable 134 mm  $\varnothing \times$  296 mm 2800 g



## Nikkor 400 mm f/5.6 IF-ED

Order code Focal length Maximum aperture ratio Picture angle Optical construction Minimum distance Aperture range Diaphragm type Filter mount Lens hood Tripod socket Dimensions Weight

400 mm 1:5.6 6° 10' 7 elements in 6 groups 4 m 5.6-32 Automatic 72 mm  $\emptyset$ Built-in Rotatable, detachable  $85 \text{ mm} \varnothing \times 262 \text{ mm}$ 1200 g

JAA505AD

#### Supplied with:

Front lens cover FA-51 Rear lens cover LF-1 Hard case CL-27A



# Nikkor 500 mm f/4.0 P IF-ED

Order code **JAA518AA** Focal length 500 mm Maximum aperture ratio 1:4.0 Picture angle 5° Optical construction 8 elements in 6 groups Minimum distance 5 m Aperture range 4–32 Diaphragm type Automatic Filter mount Lens hood Built-in

Tripod socket Dimensions Weight

#### Supplied with:

Front lens cover FA-51 Rear lens cover LF-1 Lens hood HK-17 Metal case CT-500

1 special holder for 39 mm filter; 1 special holder for gelatine filter; front end of lens has built-in UV-filter Rotatable, detachable 138 mm  $\varnothing \times$  384 mm 3000 g



## Nikkor 600 mm f/4.0 IF-ED

Order code Focal length Maximum aperture ratio Picture angle Minimum distance Aperture range Diaphragm type Filter mount

Lens hood

Tripod socket Dimensions Weight

Supplied with: Leather lens hood Rear lens cover LF-1 Metal case CT-602

JAA507A 600 mm 1:4.0 4° 10′ Optical construction 8 elements in 6 groups 6.5 m 4.0-22 Automatic 1 special holder for 39 mm filter; 1 special holder for gelatine filter; front end of lens has built-in UV-filter Built-in telescopic lens hood HE-5 Provided, rotatable 173 mm  $\varnothing$  × 473.5 mm 5650 a



# Nikkor 600 mm f/5.6 IF-ED

Order code JAA509AD Focal length 600 mm Maximum aperture ratio 1:5.6 Picture angle 4° 10' Optical construction 7 elements in 6 groups Minimum distance 5 m 5.6-32 Aperture range Diaphragm type Automatic Filter mount 1 special holder for 39 mm filter; 1 special holder for gelatine filter; front end of lens has built-in UV-filter Lens hood Built-in telescopic lens hood HE-4 Tripod socket Rotatable

132 mm Ø × 387.5 mm 2800 g

#### Supplied with:

Dimensions

Weight

Leather lens hood Rear lens cover LF-1 Metal case CT-603



## Nikkor 800 mm f/5.6 IF-ED

Order code	JAA51
Focal length	800 m
Maximum	
aperture ratio	1:5.6
Picture angle	3°
Optical construction	8 elen
Minimum distance	8 m
Aperture range	5.6–3
Diaphragm type	Autor
Filter mount	1 spec
	filter;

Lens hood

Tripod socket Dimensions Weight

#### Supplied with:

Leather lens hood Rear lens cover LF-1 Metal case CT-800 JAA517AA 800 mm 1:5.6  $3^{\circ}$ 8 elements in 6 groups 8 m 5.6–32 Automatic 1 special holder for 52 mm filter; 1 special holder for gelatine filter; front of lens has UV filter Built-in telescopic lens hood HE-3 Rotatable 163 mm  $\varnothing \times$  546 mm 5450 g



## Zoom-Nikkor 28-85 mm f/3.5-4.5

JAA726AA

28–85 mm

1:3.5-4.5

0.8 m,

3.5-22

Automatic

62 mm Ø

cation 1:3.4

510 a

74°–28° 30'

with macro setting 0.23 m

Two-ring zoom with macro

setting, maximum magnifi-

 $67 \text{ mm} \varnothing \times 89 \text{ mm}$ 

Order code Focal length Maximum aperture ratio Picture angle Optical construction 15 elements in 11 groups Minimal distance

Aperture range Diaphragm type Filter mount Special characteristics

Dimensions Weight

Supplied with: Front lens cover FA-85 Rear lens cover LF-1

Accessories: Lens hood HK-16 Hard case CL-33S Soft case CL-S2

#### Nikkor Zoom 35–70 mm f/3.3–4.5

Order code Focal length Maximum aperture ratio Picture angle Special characteristics

Minimal distance

Aperture range

Diaphragm type

Filter mount

Dimensions

Weight

1:3.3-4.5 62°-34° 20' Optical construction 8 elements in 7 groups Two-ring operation for zoom and focusing; macro range 35-70 mm 0.5 m, with macro setting 0.35 m 3.3-22 Automatic 52 mm  $63 \text{ mm} \varnothing \times 69 \text{ mm}$ 255 q

JAA722M

35-70 mm

Supplied with: Front lens cover FA-46 Rear lens cover LF-1

Accessories:

Lens hood HN-2 Hard case CL-31S Soft case CL-S1





#### Nikkor Zoom 35-105 mm f/3.5-4.5

JAA713AA

1:3.5-4.5

62°-18°

3.5-22

52 mm

510 q

Automatic

16 elements in 12 groups

1.4 m, with macro setting 0.27 m on 35 mm

64 mm ∅ × 86.5 mm

One-ring for zoom and focus-

ing; macro range 35-105 mm

35–105 mm

Order code Focal length Maximum aperture ratio Picture angle Optical construction Special characteristic Minimum distance

Aperture range Diaphragm type Filter mount Dimensions Weight

Supplied with:

Front lens cover FA-46 Rear lens cover LF-1

#### Accessories:

Lens hood HK-11 Hard case CL-33 S Soft case CL-S2

### Nikkor Zoom 35-135 mm f/3.5-4.5

Order code Focal length Maximum aperture ratio Picture angle Special characteristics

Minimal distance

Aperture range

Diaphragm type

Filter mount

Dimensions

Weight

1:3.5-4.5 62°–18° Optical construction 15 elements in 14 groups One-ring operation for zoom and focusing; with macro setting at 135 mm, max. magnification 1:3,8 1.5 m, with macro setting 0.4 m 3.5-22 Automatic 62 mm  $68 \text{ mm} \varnothing \times 112 \text{ mm}$ 600 q

JAA723AA

35-135 mm

Supplied with: Front lens cover FA 85 Rear lens cover LF 1

Accessories: Lens hood HN 22 Hard case CL 41S Soft case CL-S2





## Nikkor 35-200 mm f/3.5-4.5

JAA725AA

35-200 mm

Order code Focal length Maximum aperture ratio Picture angle Aperture range Diaphragm type Filter mount Dimensions Weight

1:3.5-4.5 62°-12°20' Optical construction 17 elements in 13 groups Minimum distance 1.6 m, with macro 0.3 m 3.5-22 Automatic diaphragm  $62 \text{ mm} \emptyset$ 70 ∅ × 119 mm 740 q

# Supplied with:

Front lens cover FA-85 Rear lens cover LF-1

Accessories: Lens hood HK-15 Lens case CL-13A Soft case CL-S4

## Zoom-Nikkor 70-210 mm f/4.5-5.6

Order code Focal length Maximum aperture ratio Picture angle Special characteristics Minimum distance Aperture range Diaphragm type Filter mount Dimensions Weight

70-210 mm 1:4.0-5.6 34° 20'–11° 50' Optical construction 12 elements in 9 groups Two-ring operation for zoom and focusing 1.5 m 4.0-32 Automatic  $52 \text{ m} \emptyset$  $64 \text{ mm} \varnothing \times 104 \text{ mm}$ 

JAA761AA

375 g

#### Supplied with: Front lens cover FA-46 Rear lens cover LF-1

Accessories: Lens hood HN-24 Hard case CL-15S/CL-38 Soft case CL-S4 62 mm  $\emptyset$  filters





## Nikkor Zoom 100–300 mm f/5.6

Order code Focal length Maximum	JAA721AA 100–300 mm
aperture ratio	1:5.6
Picture angle	24°–8°
Optical construction	14 elements in 10 groups
Special	One-ring operation for zoom
characteristics	and focusing; macro setting at 100 mm max. magnification 1:4.4
Minimum distance	2 m, with macro setting 0.71 m
Aperture range	5.6–32
Diaphragm type	Automatic
Filter mount	62 mm
Dimensions	74 mm $\varnothing$ × 199 mm
Weight	930 g

#### Supplied with:

Front lens cover FA-85 Rear lens cover LF-1

#### Accessories:

Lens hood HN-24 Hard case CL-40



## PC-Nikkor 28 mm f/3.5

Order code	JAA611AB
Focal length	28 mm
Maximum	
aperture ratio	1:3.5
Picture angle	74°
Utilizable	
picture angle	92°
<b>Optical construction</b>	9 lenses in
Minimum distance	0.3 m
Aperture range	3.5–22
Diaphragm type	Preset type
Shifting range	11 mm
Filter mount	72 mm $\varnothing$
Dimensions	78 mm $\emptyset$ :
Weight	380 g

1:3.5 74° 92° 9 lenses in 8 groups 0.3 m 3.5-22 Preset type 11 mm 72 mm  $\emptyset$ 78 mm  $\varnothing$  × 64.5 mm 380 g

#### Supplied with:

Front lens cover FA-51 Rear lens cover LF-1 Hard case CL-34A

#### Accessories:

72-mm filter Lens hood HN-9 Soft case CL-S2

## PC-Micro Nikkor 85 mm f/2.8 D

JAA628DA

85 mm

Order code Focal length Maximum aperture ratio **Diagonal picture** angle

. Minimum distance Aperture range Diaphragm type Depth-of-field preview button Shifting range Tilting range Special characteristics

1:2.8 diagonal: 28° 30' vertical: 16° horizontal: 23° 50' Optical construction 6 lenses in 5 groups 0.39 mm 2.8-45 Preset type Button to open lens to full aperture (self-locking) ± 12.4 mm + 8.3° Built-in CPU transmits effective aperture values to the camera body. Transmission of distance signal to camera body for 3D matrix metering or 3D multisensor fill-in flash for shots with full aperture without tilting or shifting 77 mm Ø  $83.5 \text{ mm} \varnothing \times 109.5 \text{ mm}$ 775 q

Filter mount Dimensions Weight

# Supplied with:

Front lens cover FA 47 Rear lens cover LF-1 Hard case CL-75

Optional accessories: 77-mm filter Lens hood HB-22 Tripod mounting spacer AH-5





## Micro-Nikkor 55 mm f/2.8

Order code Focal length Maximum aperture ratio Picture angle Minimum distance Aperture range Diaphragm type Filter mount Dimensions Weight

55 mm 1:2.8 43° Optical construction 6 elements in 5 groups 0.25 m 2.8-32 Automatic 52 mm  $\emptyset$ 63.5 mm Ø × 62 mm 290 q

JAA616AB

### Supplied with:

Front lens cover FA-46 Rear lens cover LF-1

#### Accessories:

Lens hood HN-3 Hard case CL-31 S Soft case CL-S1

#### With PK 13:

Hard case CL-33S Soft case CL-S3

With the PK 13 Ring or teleconverter TC 201, it is possible to extended the reproduction ratio to 1:1.



## **Extension Ring PK-13**

Order code Extension Dimensions Weight

FPW00902 27.5 mm 64.4 mm Ø × 30.5 mm 100 g

Supplied with: Body cover BF-1A Rear lens cover LF-1

Accessories: Hard case CL-30 S Soft case CL-S1



## Micro-Nikkor 105 mm f/2.8

Order code Focal length Maximum aperture ratio Picture angle Minimum distance Aperture range Diaphragm type Filter mount Lens hood Dimensions Weight

JAA619AA 105 mm

1:2,8 23° Optical construction 10 elements in 9 groups 0.41 m (M = 1:2)2.8-32 Automatic 52 mm Supplied, HS-14 66.5 mm Ø × 83.5 mm 515 g

## Supplied with: Front lens cover FA-46

Rear lens cover LF-1 Lens hood HS-14

#### Accessories: Hard case CL-33S

With the PN-1 ring, the reproduction ratio can be extended to 1:0.88



# **Extension Ring PN-11**

Order code Extension Dimensions Weight Tripod socket

FPW01002 52.5 mm 70.5 mm  $\varnothing \times$  67 mm 245 g Rotatable

Supplied with: Body cover BF-1A Rear lens cover LF-1



## Micro-Nikkor 200 mm f/4.0 IF

Order code Focal length Maximum aperture ratio Picture angle Minimum distance Aperture range Diaphragm type Filter mount Lens hood Tripod socket Dimensions Weight

JAA618AB 200 mm 1:4.0 12° 20' Optical construction 9 elements in 6 groups 0.71 m 4.0 - 32Automatic 52 mm  $\emptyset$ Built-in Rotatable and detachable  $66 \text{ mm} \varnothing \times 172 \text{ mm}$ 800 q

### Supplied with:

Front lens cover FA-46 Rear lens cover LF-1

#### Accessories:

Hard case CL-36 Teleconverter TC-301 Soft case CL-S4

With the teleconverter TC 301 the reproduction ratio can be extended to 1:1.



## **Teleconverter TC 301**

JAA902AC Order code Focal length Twice that of the basic focal length Optical construction 5 elements in 5 groups Aperture from f/2.8 to f/32 coupling range Effective aperture from f/5.6 to f/64 Diapraghm type Automatic Reproduction ratio Double that of lens in use Depth of field Half that of lens in use Closet focusing Same as that of lens in use distance Mount-to-mount length 83 mm 64.5 mm Ø × 115 mm Dimensions 325 g Weight

Information on the use of the TC 201 is given in the table of Nikkor Lenses

#### Supplied with: Body case BF-2 Rear lens cover LF-1

Accessories: Hard case CL-33S Soft case CL-S1



## Reflex-Nikkor 500 mm f/8.0 D

JAA506AB

500 mm

Order code Focal length Maximum aperture ratio Picture angle Special characteristics Minimum distance Diaphragm type Filter mount

Tripod socket Dimensions Weight

1:8.0 5° Optical construction 6 elements in 6 groups **Reflex lens** 1.5 m (M = 1:2.5) Fixed aperture f/8.0 39 mm, 5 filters supplied: L 37C, 056, A2, B2, ND4 Provided 89 mm  $\varnothing \times 109$  mm 840 q

## Supplied with:

Front lens cover FA-120 Rear lens cover LF-1 Lens hood HN-27 Hard case CL-39

A filter must always be mounted!



JAA5126DA

1000 mm

1:11.0 2°30'

1900 g

Order code Focal length Maximum aperture ratio Picture angle Optical construction 5 elements in 5 groups Special characteristics Minimum distance Aperture range Filter mount

Lens hood Tripod socket Dimensions Weight

**Reflex lens** 8 m Fixed aperture f/11.0 39 mm, 5 filters supplied: L37C, 056, A2, B2, ND4 Built-in Provided 119 mm Ø x 233.5 mm

#### Supplied with:

Front lens cover Rear lens cover LF1 Lens case CL-29

A filter must always be mounted!





## Teleconverter TC 14 A

Order code Focal length Optical construction Aperture	JAA904AB × 1.4 that of the lens in use 5 elements in 5 groups
coupling range	from f/1.8 to f/32
Effective aperture	from f/2.8 to f/45
Diaphragm type	Automatic
Reproduction ratio	$1,4 \times$ that of lens in use
Depth of field	About 70 % of that of lens
	in use
Closest focusing	Same as that of lens in use
distance	Mount-to-mount length
	22 mm
Dimensions	65 mm $\varnothing$ × 25.5 mm
Weight	145 g

Information on the use of the TC 14A is given in the Table of Nikkor Lenses.

#### Supplied with: Body housing BF-1 A Rear lens cover LF-1

Accessories: Hard case CL-30S Soft case CL-S1

## Teleconverter TC 14 B

JAA903AB Order code Focal length  $1.4 \times$  that of lens in use Optical construction 5 elements in 5 groups Aperture coupling range from f/2 to f/32 from f/2.8 to f/45 Effective aperture Diaphragm type Automatic Reproduction ratio  $1.4 \times$  that of lens in use Depth of field About 70 % of that of lens in use Closest focusing distance Same as that of lens in use Mount-to-mount length 22 mm  $65 \text{ mm} \varnothing \times 34 \text{ mm}$ Dimensions Weight 165 g

Information on the use of the TC 14B is given in the Table of Nikkor Lenses.

#### Supplied with:

Body housing BF-3 Rear lens cover LF-1

Accessories: Hard case CL-30 S Soft case CL-S1





#### **Teleconverter TC-201**

Order code Focal length Optical construction 7 elements in 5 groups Aperture coupling range Effective aperture Diaphragm type **Reproduction ratio** Depth of field **Closest focusing** distance Mount-to-mount length 44 mm Dimensions Weight

JAA901AD Double that of lens in use

from f/2 to f/32 from f/4 to f/64 Automatic Double that of lens in use Half that of lens in use

Same as that of lens in use

64.5 mm Ø × 52 mm 230 g

Information on the use of the TC 201 is given in the table of Nikkor Lenses.

Supplied with: Body housing BF-1A Rear lens cover LF-1

Accessories: Hard case CL-30 S Soft case CL-S1

## Teleconverter TC-301

JAA902AC Order code Focal length Optical construction 5 elements in 5 groups Aperture coupling range from f/2.8 to f/32 Effective aperture from f/5.6 to f/64 Diaphragm type Automatic Reproduction ratio Depth of field Closest focusing distance Mount-to-mount length 83 mm Dimensions Weight

Double that of lens in use

Double that of lens in use Half that of the lens in use

Same as that of lens in use

64.5 mm Ø × 115 mm 325 g

Information on the use of the TC 301 is given in the table of Nikkor Lenses.

Supplied with: Body housing BF-2 Rear lens cover LF-1

Accessories: Hard cover CL-33 S Soft case CL-S1





# LENSHOODS • PARALUCE

Lens Lenshood Obiettivo Paraluce				Mounting Attacco			Material Materiale			
	Order code	built-in	extention	screw mount	plug-in mount	snap-on mount	bayonet mount	synthetic	rubber	metal
	Codice di comando	incorporato	prolunga	a vite	a serraggio	a incastro	a baionetta	plastica	gomma	metallica
AF Fisheye										
AF 16 mm f/2.8 D		•								
AF Wideangle/grandan	igolari									
AF 14 mm f/2.8 D ED		•								
AF 18 mm f/2.8 D	HB-8 / JAB70801						Х	Х		
AF 20 mm f/2.8 D	HB-4 / JAB70401						Х	х		
AF 24 mm f/2.8 D	HN-1 / JAB30601			Х						X
AF 28 mm f/1.4 D	HK-7 / JAB60701				X					X
AF 28 mm f/2.8 D	HN-2 / JAB30701			Х						X
AF 35 mm f/2.0 D	HN-3 / JAB30801			Х						X
AF Standard				1			1	1	-	
AF 50 mm f/1.4 D	HR-2 / JAB31601			Х					Х	
AF 50 mm f/1.8	HR-2 / JAB31601			Х					Х	
AF Tele	1 1			I			1	I	1	1
AF 85 mm f/1.4 D	HN-31 / JAB33001			Х						X
AF 85 mm f/1.8 D	HN-23 / JAB32301			Х						x
AF 105 mm f/2.0 DC D		•								X
AF 135 mm f/2.0 DC D		٠								X
AF 180 mm f/2.8 D IF-ED		•								X
AF-S 300 mm f/2.8 D IF-ED II	HK-26 / JAB62901				X		Х			X
AF-S 300 mm f/4.0 D IF-ED		•								X
AF-S 400 mm f/2.8 D IF-ED II	HK-25 / JAB62601						Х			X
AF-S 500 mm f/4.0 D IF-ED	HK-24 / JAB62501						Х			X
AF-S 600 mm f/4.0 D IF-ED	HK-23 / JAB62401						Х			X
AF Zoom	11									
AF-S 17–35 mm f/2.8 D IF-ED	HB-23 / JAB72301						X	Х		
AF 18-35 mm f/3.5-4.5 D IF-ED	HB-23 / JAB72301						Х	х		
AF 24–85 mm f/2.8–4.0	HB-25 / JAB72501						Х	х		
AF 24–120 mm f/3.5–5.6 D IF	HB-11 / JAB71101						Х	х		
AF-S 28–70 mm f/2.8 D IF-ED	HB-19 / JAB71901						Х	х		
AF 28-80 mm f/3.3-5.6 G black	HB-20 GB / JAB72001						Х	х		
AF 28-80 mm f/3.3-5.6 G silver	HB-20 GS / JAB72011						Х	х		
AF 28–105 mm f/3.5–4.5 D IF	HB-18 / JAB71801						Х	х		
AF 28–200 mm f/3.5–5.6 D IF	HB-12 / JAB71201						Х	х		
AF 35–70 mm f/2.8 D	HB-1 / JAB70101						Х	Х		
AF 70–300 mm f4.0/5.6 D ED	HB-15 / JAB71501						Х	х		
AF 70–300 mm f4.0/5.6 G black	HB-26 GB / JAB72601			1			X	х		
AF 70–300 mm f4.0/5.6 G silver	HB-26 GS / JAB72621						Х	Х		
AF 80–200 mm f/2.8 D	HB-7 / JAB70701						X	х		
AF-S 80–200 mm f/2.8 D	HB-17 / JAB71701						Х	х		
AF-VR 80–400 mm F 4.5–5.6 D ED							X	х		

Lens Obiettivo	Lenshood Paraluce	Mounting Attacco			Material Materiale					
	Order code	built-in	extention	screw mount	plug-in mount	snap-on mount	bayonet mount	synthetic	rubber	metal
	Codice di comando	incorporato	prolunga	a vite	a serraggio	a incastro	a baionetta	plastica	gomma	metallica
AF Special/Speciali										
AF Micro 60 mm f/2.8 D	HN-22 / JAB32201			X						X
AF Micro 105 mm f/2.8 D	HS-7 / JAB00202			^		x				X
AF Micro 200 mm f/4.0 D IF-ED	HN-30 / JAB32901			X		^				X
AF Micro Zoom 70–180 mm f/4.5–5.6 D ED	HB-14 / JAB71401						x	x		
Fisheye							X	X		
16 mm f/2.8		•								
Wideangle/Grandangc	olari									
15 mm f/3.5		•								
18 mm f/3.5	HK-9 / JAB60901				Х					Х
20 mm f/2.8	HK-14 / JAB61301				Х					Х
24 mm f/2.0	HK-2 / JAB60301				Х					X
24 mm f/2.8	HN-1 / JAB30601			X						X
28 mm f/2.0	HN-1 / JAB30601			X						X
28 mm f/2.8	HN-2 / JAB30701			X						X
35 mm f/1.4	HN-3 / JAB30801			X						X
35 mm f/2.0	HN-3 / JAB30801			X						X
Standard										
45 mm f/2.8 P silver	HN-35 S / JAB33301			Х						Х
45 mm f/2.8 P black	HN-35 B /			X						X
50 mm f/1.2	HS-12 / JAB00301					X				X
50 mm f/1.2	HR-2 / JAB31601			X					Х	
50 mm f/1.4	HS-9 / JAB00103					X				X
50 mm f/1.4	HR-1 / JAB31501			Х					Х	
50 mm f/1.8	HS-11 / JAB31701			X					Х	
50 mm f/1.8	HR-4 / JAB00501					X				X
Tele										
85 mm f/1.4	HN-20 / JAB32001			Х						X
105 mm f/1.8		•								X
105 mm f/2.5		•								X
135 mm f/2.0		•								X
135 mm f/2.8		•								X
180 mm f/2.8 ED		•								X
200 mm f/2.0 IF-ED		•								X
400 mm f/2.8 IF-ED		•								X
400 mm f/3.5 IF-ED		•								X
400 mm f/5.6 IF-ED		•								X
500 mm f/4.0 P IF-ED	HK-17 / JXA10069				X					X
600 mm f/4.0		•								X
600 mm f/5.6 IF-ED		•								X

Lens Obiettivo	Lenshood Paraluce			Mounting Attacco			Material Materiale			
Order code	built-in	extention	screw mount	plug-in mount	snap-on mount	bayonet mount	synthetic	rubber	metal	
	Codice di comando	incorporato	prolunga	a vite	a serraggio	a incastro	a baionetta	plastica	gomma	metallica
Zoom		1					1		1	
		1		1		1	1		1	
28-85 mm f/3.5-4.5	HK-16 / JAB61801				X					X
35–70 mm f/3.3–4.5	HN-2 / JAB30701			Х						Х
35–105 mm f/3.5–4.5	HK-11 / JAB61101				Х					Х
35–135 mm f/3.5–4.5	HN-22 / JAB32201			Х						Х
35–200 mm f/3.5–4.5	HK-15 / JAB61701				Х					Х
70–210 mm f/4.5–5.6 D	HR-1 / JAB31501			Х					Х	
100–300 mm f/5.6	HN-24 / JAB32401			Х						Х
Special/Speciali										
PC Nikkor 28 mm f/3.5	HN-9 / JAB30401			Х						Х
PC Nikkor 85 mm f/2.8 D	HB-22 / JAB72201						Х	Х		
Micro 55 mm f/2.8	HN-3 / JAB30801			Х						Х
Micro 105 mm f/2.8	HS-14 / JAB00801					х				Х
Micro 200 mm f/4.0 IF		•								Х
Reflex 500 mm f/8.0	HN-27 / JXA10064			Х						Х
Reflex 1000 mm f/11.00		•								Х

Order code Codice di comando	
HN-1/JAB30601	AF 24 mm f/2.8 AF D PC 35 mm f/2.8 AI-S 24 mm f/2.8 AI-S 28 mm f/2.0
HN-2/JAB30701	AF 28 mm f/2.8 D AI-S 28 mm f/2.8
HN-3/JAB30801	AF 35 mm f/2.0 D AI-S 35 mm f/1.4 AI-S 35 mm f/2.0 AI-S 55 mm f/2.8 Micro
HN-9/JAB30401	PC 28 mm f 3.5
HN-12/JAB31301	Polarisation filters 52 mm Polarizzatore filtri 52 mm
HN-13/JAB31401	Polarisation filters 72 mm Polarizzatore filtri 72 mm
HN-20/JAB32201	AI-S 85 mm f/1.4
HN-22/JAB32201	AF 60 mm f/2.8 D Micro
HN-23/JAB32301	AI-S 80–200 mm f/4.0 AF 85 mm f/ 1.8 D
HN-26/JAB32601	Polarisation filters 62 mm Polarizzatore filtri 62 mm
HN-27/JXA10064	500 mm f/ 8.0 Reflex
HN-30/JAB32901	AF 200 mm f/4.0 D Micro
HN-31/JAB33001	AF 85 mm f/ 1.4 D
HN-34/JAB33201	Polarisation filters 77 mm Polarizzatore filtri 77 mm
HN-355/JAB33301	AI 45 mm f/2.8 P silver/argento
HN-35B/JAB33302	AI 45 mm f/2.8 P black/nero
HK-2/JAB60301	AI-S 24 mm f/2.8
HK-7/JAB60701	AF 28 mm f/1.4 D
HK-9/JAB60901	AI-S 18 mm f/3.5
HK-11/JAB61101	AI-S 35–105 mm f/3.5–4.5
HK-14/JAB60701	AI-S 20 mm f/2.8
HK-16/JAB61801	AI-S 28-85 mm f/3.5-4.5
HK-17/JAB10069	AI-S 500 mm f/4.0 P IF-ED
<b>HK-22</b> /JAB62301	AF-S 300 mm f/2.8 IF-ED
HK-23/JAB62401	AF-S 600 mm f/4.0 IF-ED
HK-24/JAB62501	AF-S 500 mm f/4.0 IF-ED
HK-25/JAB62601	AF-S 400 mm f/2.8 IF-ED
HK-26B/JAB62901	AF-S II 300 mm f/2.8 IF-ED
HK-27B/JAB63001 HK-28B/JAB63101	AF-S II 400 mm f/2.8 IF-ED AF-S II 500 mm f/4.0 IF-ED
HK-29B/JAB63201	AF-S II 600 mm f/4.0 IF-ED









HB-1/JAB70101	AF 35–70 mm f/2.8D AF 35–135mm f/3.5–4.5 D
HB-3/JAB70301	AF 24–50 mm f/3.3–4.5 D
HB-4/JAB70401	AF 20 mm f/ 2.8 D
<b>HB-7</b> /JAB70701	AF 80–200 mm f/ 2.8 D IF-ED
HB-8/JAB70801	AF 18 mm f/ 2.8 D
<b>HB-11</b> /JAB71101	AF 24–120 mm f/ 3.3–5.6 D
HB-12/JAB71201	AF 28–200 mm f/3.5–5.6 D
HB-14/JAB71401	AF 70–180 mm f/ 4.5–5.6 D Micro
HB-15/JAB71501	AF 70–300 mm f/ 4.0–5.6 D ED
HB-17/JAB71701	AF-S 80–200 mm f/ 2.8 D IF-ED
HB-18/JAB71801	AF 28–105 mm f/ 3.5–4.5 D
HB-19/JAB71901	AF-S 28–70 mm f/2.8 D
HB-20GS/JAB72011	AF 28–80 mm G f/3.5–5.6 silver/argento
HB-20GB/JAB72001	AF 28–80 mm G f/3.3–5.6 black/nero
HB-22/JAB72201	PC 85 mm f/2.8 D Micro
HB23/JAB72301	AF-S 17–35 mm f/2.8 D IF-ED AF 18–35 mm f/3.5–4.5 D
HB-24/JAB72401	AF-VR 80–400 mm f/4.5–5.6 D ED
HB-25/JAB72501	AF 24–85 mm f/2.8–4.0 D
HB-26GS/JAB72621	AF 70–300 mm G f/4.0–5.6 silver/argento
HB-26GB/JAB72601	AF 70–300 mm G f/4.0–5.6 black/nero
HR-1/JAB31501	AI-S 50 mm f/1.4 AI-S 70–210 mm f/4.5–5.6
HR-2/JAB31601	AF 50 mm f/ 1.4 D AF 50 mm f/ 1.8 AI-S 50 mm f/1.2
HS-7/JAB00202	AF 105 mm f/2.8 D Micro
<b>HS-9</b> /JAB00103	AI-S 50 mm f/1.4
HS-11/JAB00501	AI-S 50 mm f/1.8
HS-12/JAB00301	AI-S 50 mm f/1.2
HS-14/JAB00801	AS-I 105 mm f/2.8 Micro
HE-3/JAB61401	AI-S 400 mm f/2.8 IF-ED AI-S 800 mm f/5.6 IF-ED
<b>HE-4</b> /JAB61501	AI-S 200 mm f/2.0 IF-ED AI-S 600 mm f/5.6 IF-ED
HE-5/JAB61601	AI-S 600 mm f/4.0 IF-ED
HE-6/JAB61502	AF 300 mm f/2.8 IF-ED

# FILTERS • FILTRI

Filter Filtri			Order code Codice di co	omando										Filter factor Coefficiente
			39 mm	46 mm	52 mm	58 mm	62 mm	72 mm	77 mm	82 mm	95 mm	122 mm	Bajonett Baionetta	
Skylight		L1BC	FLA-61 FTA00201		FLA-20 FTA05401		ALA-30 FTA10101	ALA-22 FTA15402					FLA-62 FTA40101	1
Ultraviolet Ultravioletto		L37		FLA-50 FTA45101										1
onumoiento		L37C	FLA-51 FTA00101		FLA-19 FTA05301		ALA-31 FTA10201	ALA-18 FTA15301	ALA-29 FTA60101	FLA-22 FTA55101	FLA-38 FTA205AA	FLA-41 FTA252AA	FLA-68 FTA40701	1
		L39			FLA-18 FTA05101									1
	NC blac	:k/nero	FLAN-3 FTA01701		FLAN-5 FTA07701	FLA-10 FTA70101	ALAN-6 FTA11401	ALAN-7 FTA16601	ALAN-8 FTA60801					1
	NC silve	er/argento			FLANC FTA07702									1
Yellow Giallo	bright chiaro	Y44			FLA-3 FTA05501									1,5/1
	medium media	Y48	FLA-72 FTA01401		FLA-4 FTA05601		ALA-32 FTA10301	ALA-19 FTA15501	ALA-51 FTA60201		FLA-34 FTA202AA	FLA-44 FTA253AA	FLA-66 FTA40501	1,7/1,2
	dark scuro	Y52	FLA-52 FTA00301		FLA-5 FTA05701									2/1,4
Orange Arrancio		056	FLA-53 FTA00401		FLA-6 FTA05801		ALA-33 FTA10401	ALA-20 FTA15601	ALA-52 FTA60301		FLA-36 FTA203AA	FLA-46 FTA254AA	FLA-63 FTA40201	3,5/2
Red Rosso		R60	FLA-54 FTA00501		FLA-7 FTA05901		ALA-34 FTA10501	ALA-21 FTA15701	ALA-53 FTA60401		FLA-37 FTA204AA	FLA-47 FTA255AA	FLA-67 FTA40601	5/6
Green Verde	bright chiaro	X0			FLA-8 FTA06001									2/1,7
	dark scuro	X1			FLA-9 FTA06101									5/3,5
Circular polar Polarizzatore				FTA07401	FLA-10Z	FTA11301	ALA-35Z FTA16501	ALA-23Z FTA6701	ALA-56Z					2-4/2-4
	slip-in slitta		C-PL1S FTA01501		C-PL1L FTA07501									2-4/2-4
Neutral gray Grigio neutro		ND2S	FLA-69 FTA01801											2
		ND4S	FLA-73 FTA01901		FLA-75 FTA07801			ALA-24 FTA15801						4
		ND8S	FLA-74 FTA02001		FLA-76 FTA07901									8
		ND400			FLA-70 FTA06401									400
Amber Ambra	bright chiaro	A2	FLA-55 FTA00601		FLA-13 FTA06501		ALA-36 FTA10701	ALA-25 FTA16001	ALA-54 FTA60501				ALA-64 FTA40301	1,2
	dark scuro	A12	FLA-56 FTA00701		FLA-14 FTA06601		ALA-37 FTA10801							2
Blue Blu	bright chiaro	B2	FLA-57 FTA00801		FLA-15 FTA06701		ALA-38 FTA10901	ALA-26 FTA16101	ALA-55 FTA60601				ALA-65 FTA40401	1,2
	medium media	B8	FLA-58 FTA00901		FLA-11 FTA06801									1,6
	dark scuro	B12	FLA-59 FTA01001		FLA-12 FTA06901		ALA-39 FTA11001							2,2
Diffusing scre Diffusore	en	Nr. 1			FLA-S1 FTA07101		ALA-40 FTA11101	ALA-27 FTA16201						
		Nr. 2			FLA-S2 FTA07201		ALA-41 FTA11201	ALA-28 FTA16301						

# Skylight L1BC

Colour films also register the invisible ultraviolet radiation. In mountainous areas, this can produce a bluish tinge. The Nikon L1BC filter corrects this bluish tinge by absorbing the UV light. This improves the contrast of the picture. Haze is suppressed and blue tinges corrected. The blue of the summer sky appears more natural and more remote details appear clearer. The L1BC filter is provided with a multilayer coat to prevent undesired flare.

## Ultraviolet L37C, L37, NC, L39

Ultraviolet light is invisible to the human eye but may have a very adverse effect on both colour photographs and black/white photographs. The L37C/L37/NC filters are normal UV absorption filters, while type L39 absorbs more UV light and is used in particular for black/white photography, for example for photographs on the beach and in the mountains. The L37C/BNC filter is provided with a multilayer coat to prevent undesired flare. The L37C/L37/NC filters can remain on the lens as front lens protection since they do not produce any colour changes.

## Yellow Y44, Y48, Y52

(only for black/white films)

Yellow filters absorb blue light, so that this colour is reproduced darker in the positive. This filter colour is particulary suitable for landscape photography and for shooting over large distances. Nikon yellow filters absorb not only blue light but also ultraviolet light. The blue sky is reproduced darker, and haze is in some cases better penetrated. Y44 is a clear yellow filter, while Y48 and Y52 have increasing filter actions.

## Orange 056

(only for black/white films)

The orange filter too absorbs blue and ultraviolet as well as green. Consequently, green areas are reproduced in darker shades. A blue sky appears even darker than when the yellow filter is used. This filter is therefore often used for achieving a more «dramatic» effect in landscape photography. Clouds and surface structure are greatly emphasised.



Red R60 (only for black/white films)

The red filter increases the contrast. It absorbs all colours except red. A blue sky appears almost black, giving clouds a very dramatic appearance. Green areas, such as leaves or grass, are reproduced in very dark shades, so that red subjects are greatly contrasted with these areas. Red filters are also frequently used together with infrared film.

## Green X0, X1

(only for black/white films)

Green filters absorb red and blue light but transmit yellow and green light. Consequently, the spectral sensitivity with the film is matched well with that of the human eye. X0 absorbs red to a lesser extent and is universally applicable. X1 absorbs red to a greater extent and is the refore suitable for photography in artificial light, for example portraits.

## **Circular polarisation filters**

Polarisation filters suppress reflections from non metallic surfaces. When taking photographs through glass panes, or when undesired reflections from water surfaces have to be eliminated, polarisation filters are frequently used. These filters can also increase the contrast and the colour saturation without producing colour shifts. The blue of the sky is reinforced by the polarisation filters. Nikon circular polarisation filters are available in a rotatable mount. Must be used with all autofocus cameras. For lenses with big focal length new slip-in circular polarisation filters are available.

#### Accessories:

Lens hood for 52 mm polarisation filter, HN-12 for lenses from 35 mm to 200 mm • Lens hood for 62 mm polarisation filter, HN-26 for 62 mm lenses • Lens hood for 72 mm polarisation filter, HN-13 for 180 mm, 300 mm and 400 mm lenses

## Neutral grey ND2S, ND4S, ND8S, ND400

Neutral grey filters absorb all colours equally and therefore have no effect on colour reproduction. They are for reducing the amount of incident light. This makes it possible, for example, to limit the depth of field when it is impossible to set a faster shutter speed. A neutral grey filter can be useful even when the light is so bright that there is no suitable speed/aperture combination for correct exposure. ND400 is used for scientific and infrared photography.

## Amber A2

The «cold» light during cloudy weather produces a slight bluish cast even with daylight film. The pale amber filter A2 ensures «warmer» and hence more friendly colours.

## Amber A12

The A12 filter is a conversion filter which is used when an artificial-light film is exposed in daylight.

## Blue B2

The daylight film is «warmer» early in the morning and during the late afternoon. With a daylight film, this leads to a slightly reddish cast, which is corrected by the B2 filter.

## Blue B8

The B8 filter has a more pronounced blue colour. It is used for correction when daylight film is exposed to light from white flash bulbs.

## Blue B12

The B12 filter is a conversion filter which neutralises the reddish cast produced when a daylight film is exposed to artificial light.



## Nikon soft focus filter no. 1/no. 2

with 52/62/72 mm diameter

Soft focus filter no. 1 is a weaker version suitable for portraits and similar images of large as well as backlit subjects. No. 2 is stronger and covers landscapes or distant views with a strong haze. Soft focus filters owe their attractive effect to a special coating with which pleasantly soft images can be obtained, even with small apertures.

## Filter holder

Order code Filter thread for lens FA58/JXA10075 39 mm ∅ AF-I 300 mm /2.8 IF-ED; AF-I 400/2.8 IF-ED; AF-I 500/ 4.00 D IF-ED; AF-I 600/4.00 D IF-E

Order code Filter thread for lens FA53/JXA10035 39 mm ⊘ AF 300 mm/2.8 IF-ED; 400 mm/ 2.8 IF-ED; 400 mm/3.5 IF-ED; 500 mm/4.0 P IF-ED; 600 mm/ 4.0 IF-ED; 600 mm/5.6 IF-ED

Order code Filter thread for lens FA49/JXA10079 52 mm ∅ AF-I 300/2.8 IF-ED; AF-I 400/2.8 IF-ED; AF-I 500/4.00 D IF-ED; AF-I 600/4.00 D IF-ED

## Gelatine filter holder

Order code Filter thread Gelatine filter Accessories: Lens hood HN-12

Order code Filter thread Gelatine filter Lens hood AF2/FTW00201 72 mm  $\varnothing$ 90 × 90 mm including

AF1/FTW00101

52 mm  $\emptyset$ 

75 × 75 mm

Order code Filter thread for lens AF4/JXA10076 39 mm ∅ AF-I 300/2.8 D IF-ED; AF-I400/ 2.8 IF-ED; AF-I 500/4.0 D-ED; AF-I 600/4.0 D IF-E

Order code Filter thread for lens

Order code Filter thread for lens FA54/JXA10053 39 mm ∅ 300 mm/2.8 IF-ED

FA48/JXA10080 52 mm ∅ AF-I 300/2.8 D IF-ED; AF-I 400/2.8 IF-ED; AF-I 500/4.0 D IF-ED; AF-I 600/4.0 D IF-ED

## Filter bag CA-1

 Order code
 FTE001011

 Space for
 6 filters 52/62 mm ∅

## Filter bag CA-2

 Order code
 FTE002011

 Space for
 6 filters 39 mm ∅

Filter adapter UR-1

Order code	FTW00301
Adapter	72–62 mm $\varnothing$









## Front lens cover for 15 mm f/3.5

Order code

JXA10049

### Front lens cover for 16 mm f/2.8

Order code

JXA10048

# Front lens cover 46 mm Ø

Order code

JBD00201

# Front lens cover 52 mm $\varnothing$

Order code

JAD00102

### Front lens cover 58 mm Ø

Order code

JAD00901

# Front lens cover 62 mm Ø

Order code JAD0060

# Front lens cover 72 mm $\varnothing$

Order code JAD0070

### Front lens cover 77 mm Ø

Order code JAD00801

# Front lens cover metallic 95 mm $\varnothing$

Order code

JAD0030

# Leather lens hood 108 mm $\varnothing$

Order code

JXA10034

## Leather lens hood for AF-I Nikkor 400 mm f/2.8D

Order code

JXA10078













## Leather lens hood for AF-I Nikkor 500 mm f/4.0D

Order code

JXA10081

## Leather lens hood for AF-I Nikkor 500 mm f/4.0 P IF-ED

Order code

JXA10070

#### Leather lens hood 89 mm Ø

Order code

JXAI0068

## Rear lens cover LF-1

Order code /JAD50101

## Rear lens cover LF-1P

Order code JF

JPD50111

### Rear lens cover LF-3 for IX Nikkor lenses

Order code

JBD50101

## Front cover BF-2

Order code Use JXA10052 for teleconverter TC-301

# Front cover BF-3

Order code Use JXA10054 for teleconverter TC-14B

# Nikon Bayonet – C mount adapter

Order code Use FPW01201 Video, 16 mm-Camera

# Cleaning set

Order code Consisting of 8H5J1014 bellows, cleaning cloth and cleaning paper













# HARD CASES/SOFT POUCHES/METAL CASES • ASTUCCI RIGIDI/SACCHETTI SOFFICI/VALIGIA METALLICA

Lens Obiettivo				Soft pouche Sacchetto soffice		Metal case Valigia metallica		
AF 16 mm Fisheye 2.8 D	CL-31S	JAE41501	CL-S1	JAE44601	Valigia III			
AF 14 mm 2.8 D ED	-	57241501	CL-S2	JAE44611				
AF 18 mm 2.8 D		JAE43701	CL-52	JAE44601				
AF 20 mm 2.8 D	CL-30S	JAE41401	CL-S1	JAE44601				
AF 24 mm 2.8 D	CL-305	JAE41401	CL-S1	JAE44601				
AF 28 mm 1.4 D	CL-303	JAE43401	CL-51	JAE44601				
AF 28 mm 2.8 D	CL-44 CL-30S	JAE41401	CL-32	JAE44601				
AF 35 mm 2.0 D	CL-305	JAE41401	CL-S1	JAE44601				
AF 50 mm 1.4 D		JAE41401 JAE41401		JAE44601 JAE44601				
AF 50 mm 1.4 D AF 50 mm 1.8 D	CL-30S	JAE41401 JAE41401	CL-S1 CL-S1	JAE44601 JAE44601				
AF 85 mm 1.4 D	CL-44	JAE43401	CL-S2	JAE44611				
AF 85 mm 1.8 D	CL-155	JAE40603	CL-S2	JAE44611				
AF DC 105 mm 2.0 D	CL-38	JAE42801	CL-S3	JAE44621				
AF DC 135 mm 2.0 D	CL-38	JAE42801	CL-S3	JAE44621				
AF 180 mm 2.8 D IF-ED	CL-38	JAE42801	CL-S4	JAE44631				
AF S 300 mm 2.8 D IF-ED II			CL-L1	JAE30101				
AF S 300 mm 4.0 D IF-ED			CL-ML					
AF S 400 mm 2.8 D IF-ED II					CT-402	JAE91401		
AF S 500 mm 4.0 D IF-ED					CT-502	JAE91203		
AF S 600 mm 4.0 D IF-ED II					CT-606	JAE90804		
	et 76		ci co			1		
AF 17–35 mm 2.8 D IF-ED	CL-76	JAE44901	CL-S3	JAE44621				
AF 18–35 mm 3.5–4.5 D IF-ED	_		CL-S2	JAE44611				
AF 24–50 mm 3.3–4.5 D	CL-32S	JAE41601	CL-S2	JAE44611				
AF 24–85 mm 2.8–4.0 D IF	CL-32S	JAE41601	CL-S2	JAE44611				
AF 24–120 mm 3.5–5.6 D IF	CL-49	JAE43901	CL-S2	JAE44611				
AF S 28–70 mm 2.8 D IF-ED	CL-74	JAE44701	CL-S4	JAE44631				
AF 28–80 mm 3.3–5.6 G								
AF 28–105 mm 3.5–4.5 D IF	CL-49	JAE43901	CL-S2	JAE44611				
AF 28–200 mm 3.5–5.6 D IF	CL-49	JAE43901	CL-S4	JAE44631				
AF 35–70 mm 2.8 D	CL-33S	JAE41702	CL-S3	JAE44621				
AF 70–300 mm 4.0–5.6 ED	CL-72	JAE44301	CL-S4	JAE44631				
AF 70–300 mm 4.0–5.6 G	CL-72	JAE44301	CL-S4	JAE44631				
AF 80–200 mm 2.8 D	CL-43A	JAE43302	CL-S3	JAE44621				
AF S 80–200 mm 2.8 IF-ED	CL-73	JAE44401						
AF 80–400 mm VR 4.5–5.6 ED	CL-M1	JAE21101	-					

Lens Obiettivo		Hard case Soft pouche Astuccio rigido Sacchetto soffice			Metal cas Valigia m	
Fisheye						
16 mm f/2.8	CL-30S	JAE41401	CL-S1	JAE44601		
Wideangle/grandangolo						
15 mm f/3.5	CL-17	JAE40701				
18 mm f/3.5	CL-37	JAE42601				
20 mm f/2.8	CL-30S	JAE41401	CL-S1	JAE44601		
24 mm f/2.0	CL-31S	JAE41401	CL-S1	JAE44601		
24 mm f/2.8	CL-30S	JAE41501	CL-S1	JAE44601		
28 mm f/2.0	CL-31S	JAE41501	CL-S1	JAE44601		
28 mm f/2.8	CL-30S	JAE41401	CL-S1	JAE44601		
35 mm f/1.4	CL-31S	JAE41501	CL-S1	JAE44601		
35 mm f/2.0	CL-31S	JAE41501	CL-S1	JAE44601		
Standard		•	·			•
45 mm f/2.8 P			CL-S1	JAE44601		
50 mm f/1.2	CL-31S	JAE41501	CL-S1	JAE44601		
50 mm f/1.4	CL-30S	JAE41401	CL-S1	JAE44601		
50 mm f/1.8	CL-30S	JAE41401	CL-S1	JAE44601		
Tele						
85 mm f/1.4	CL-34A	JAE41801	CL-S2	JAE44611		
105 mm f/1.8	CL-15S	JAE40603	CL-S2	JAE44611		
105 mm f/2.5	CL-32S	JAE41601	CL-S2	JAE44611		
135 mm f/2.0	CL-15S	JAE40603	CL-S2	JAE44611		
135 mm f/2.8	CL-32S	JAE41601	CL-S2	JAE44611		
180 mm f/2.8 ED	CL-35A	JAE41901	CL-S3	JAE44621		
200 mm f/2.0 IF-ED					CT-200	JAE90901
400 mm f/2.8 IF-ED					CT-400	JAE90701
400 mm f/3.5 IF-ED	CL-61A	JAE42102				
400 mm f/5.6 IF-ED	CL-27A	JAE41101				
500 mm f/4.0 P IF-ED					CT-500	JAE91201
600 mm f/ 4.0					CT-602	JAE90302
600 mm f/ 5.6 IF-ED					CT-603	JAE90801
800 mm f/5.6 IF-ED					CT-800	JAE91101
Lens Obiettivo		Hard case Astuccio rigido		Soft pouche Sacchetto soffice		allica
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Zoom						
28–85 mm f/3.5–4.5	CL-33S	JAE41702	CL-S2	JAE44611		
Micro 105 mm f/2.8	CL-31S	JAE41501	CL-S1	JAE44601		
35–105 mm f/3.5–4.5	CL-33S	JAE41702	CL-S2	JAE44611		
35–135 mm f/3.5–4.5	CL-15S	JAE40603	CL-S2	JAE44611		
35–200 mm f/3.5–4.5	CL-13A	JAE40402	CL-S3	JAE44621		
70–210 mm f/4.5–5.6 D	CL-41	JAE43101				
100–300 mm f/5.6	CL-40	JAE43001				
Special/Speciale						
PC Nikkor 28 mm f/3.5	CL-34A	JAE41801	CL-S1	JAE44601		
PC Nikkor 85 mm f/2.8 D	CL-75	JAE44801	CL-S1	JAE44601		
Micro 55 mm f/2.8	CL-315	JAE41501	CL-S1	JAE44601		
Micro 55 mm f/2.8 mit PK-13	CL-335	JAE41702				
Micro 105 mm f/2.8	CL-33S	JAE41702				
Micro 105 mm f/2.8 mit PN-11	CL-35A	JAE41901				
Micro 200 mm f/4.0 IF	CL-36	JAE42001				
Reflex 500 mm f/8.0	CL-39	JAE42901				
Reflex 1000 mm f/11.0	CL-29	JAE41301				
Teleconverter TC-14A	CL-305	JAE41401	CL-S1	JAE44601		
Teleconverter TC-14B	CL-30S	JAE41401	CL-S1	JAE44601		
Teleconverter TC-14E	CL-30S	JAE41401	CL-S1	JAE44601		
Teleconverter TC-20E	CL-315	JAE41501	CL-S2	JAE44611		
Teleconverter TC-201	CL-30S	JAE41401	CL-S1	JAE44601		
Teleconverter TC-301	CL-33S	JAE41702				

EL-Nikkor Lenses Obiettivi EL-Nikkor	Focal length Lunghezza focale	Minimum aperture ratio Apertura minima	Optical construction Schema ottico	Picture ratio optimal Ingrandimento standard	Picture ratio possible Ingrandimento massimo	Angle of field Angolo di campo	Corrected for frequency range Spettro delle lunghezze d'onda corrette	Lens field $\oslash$ (mm) Diagonale dell'originale $\oslash$ (mm)	Format size (mm) Formato dell'originale (mm)	Weight Peso	Dimensions ⊘ (mm) Dimensioni (mm)	Filter thread $\varnothing$ (mm) Diametro ghiera portafiltri anteriore (mm)	Attachment size ⊘ Diametro ghiera posteriore
40 mm f/4.0	40,1 mm	f/22	6-4	10×	5×-30×	52°	380–700 nm	40,5	24×36	100	52×39	40,5×0,5	39×1
50 mm f/2.8	50 mm	f/16	6-4	8×	2×-20×	46°	380–700 nm	43,2	24×36	105	51×39	40,5×0,5	39×1
63 mm f/2.8	63 mm	f/16	6-4	8×	2×-20×	46°	380–700 nm	55,2	32×45	120	51×42,5	40,5×0,5	39×1
75 mm f/4.0	75 mm	f/22	4-3	5×	2×–10×	52°	380–700 nm	80	60×60	90	51×33	40,5×0,5	39×1
80 mm f/5.6	80 mm	f/32	6-4	5×	2×–15×	56°	380–700 nm	95	60×70	100	51×38,5	40,5×0,5	39×1
105 mm f/5.6	105 mm	f/32	6-4	5×	2×–10×	51°	380–700 nm	120	60×90	110	51×40	40,5×0,5	39×1
135 mm f/5.6	135 mm	f/45	6-4	5×	2×–10×	53°	380–700 nm	160	90×120	190	56×47,5	52×0,75	39×1 50×0,75
150 mm f/5.6	150 mm	f/45	6-4	4×	2×-8×	51°	380–700 nm	180	100×130	210	56×50,2	52×0,75	39×1 50×0,75
180 mm f/5.6A	179,6 mm	f/45	6-4	4×	2×-8×	54°	380–700 nm	230	130×180	430	77×62	72×1	72×1
210 mm f/5.6	210 mm	f/45	6-4	4×	2×-8×	54°	380–700 nm	270	130×210	600	82×77	68×0,75	72×1
240 mm f/5.6	240 mm	f/45	6-4	4×	2×-4×	57°	300–700 nm	330	180×240	860	97×77,5	86×1	90×1
300 mm f/5.5	300 mm	f/45	6-4	4×	1×-8×	57°	380–700 nm	410	270×330	1190	97×94	86×1	90×1

### EL-Nikkor 40 mm f/4.0 N

Order code Focal length Maximum aperture ratio Picture angle Optical construction Standard magnification Magnification range Aperture range Corrected for wavelength range Diameter of original 40.5 mm Ø Format size Dimensions Weight Attachment size (dia × pitch) Rear mount size (dia × pitch)

JNA005AA 40.1 mm 1:4.0 52° 6 elements in 4 groups 10 × 5 × - 30 × 4.0-22 380–700 nm 24 mm × 36 mm 52 mm  $\varnothing \times$  39 mm 100 g 40.5 mm  $\varnothing \times 0.5$  mm

39 mm Ø × 1/26"

### EL-Nikkor 50 mm f/2.8 N

Order code JNA001AC Focal length 50 mm Maximum aperture ratio 1:2.8 Picture angle 46° Optical construction 6 elements in 4 groups Standard magnification 8 × Magnification range  $2 \times -20 \times$ Aperture range 2.8-16 Corrected for 380–700 nm wavelength range Diameter of original 43.2 mm × Format size 24 mm × 36 mm Dimensions 51 mm  $\varnothing$  × 39 mm Weight 105 g Attachment size 40.5 mm Ø 0.5 mm (dia × pitch) Rear mount size 39 mm Ø × 1/26" (dia × pitch)

### EL-Nikkor 63 mm f/2.8 N

Order code	JNA004AA
Focal length	63 mm
Maximum	
aperture ratio	1:2.8
Picture angle	46°
<b>Optical construction</b>	6 elements in 4 groups
Standard	
magnification	8 ×
Magnification range	2 × - 20 ×
Aperture range	2.8–16
Corrected for	
wavelength range	380–700 nm
<b>Diameter of original</b>	55.2 mm $\oslash$
Format size	32 mm × 45 mm
Dimensions	51 mm $\varnothing$ × 42.5 mm
Weight	120 g
Attachment size	
(dia × pitch)	40.5 mm $\varnothing$ × 0.5 mm
Rear mount size	
(dia × pitch)	39 mm $\varnothing$ × 1/26"







### EL-Nikkor 75 mm f/4.0 N

JNA101AB Order code Focal length 75 mm Maximum aperture ratio 1:4.0 52° Picture angle Optical construction 4 elements in 3 groups Standard magnification 5 × Magnification range  $2 \times -10 \times$ Aperture range 4.0-22 Corrected for wavelength range 380-700 nm Diameter of original 80 mm Ø Format size 60 mm × 60 mm 51 mm  $\varnothing$  × 33 mm Dimensions Weight 90 q Attachment size 40.5 mm  $\varnothing \times 0.5$  mm (dia × pitch) Rear mount size  $39 \text{ mm} \varnothing \times 1/26''$ (dia × pitch)



### EL-Nikkor 80 mm f/5.6 N

JNA102AB Order code Focal length 80 mm Maximum aperture ratio 1:5.6 53° Picture angle Optical construction 6 elements in 4 groups Standard magnification 5 x Magnification range  $2 \times -15 \times$ Aperture range 5.6 - 32 Corrected for wavelength range 380-700 nm Diameter of orginal 95 mm ∅ 60 mm × 70 mm Format size Dimensions 51 mm  $\varnothing$  × 38,5 mm Weight 100 g Attachment size (dia × pitch) 40.5 mm  $\varnothing$  × 0.5 mm Rear mount size (dia × pitch)  $39 \text{ mm} \oslash \times 1/26''$ 

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### EL-Nikkor 105 mm f/5.6

Order code	JNA103AB
Focal length	105 mm
Maximum	
aperture ratio	1:5.6
Picture angle	51°
<b>Optical construction</b>	6 elements in 4 groups
Standard	
magnification	5 ×
Magnification range	2 × - 10 ×
Aperture range	5.6 – 32
Corrected for wave-	
length range	380–700 nm
<b>Diameter of original</b>	120 mm $\varnothing$
Format size	60 mm × 90 mm
Dimensions	51 mm $\varnothing$ × 40 mm
Weight	110 g
Attachment size	
(dia × pitch)	40.5 mm $\varnothing$ × 0.5 mm
Rear mount size	
(dia × pitch)	39 mm $\varnothing$ × 1/26"



### EL-Nikkor 135 mm f/5.6 N

Order code	JNA201AC
Focal length	135 mm
Maximum	
aperture ratio	1:5.6
Picture angle	53°
•	55
Optical construction	o elements in 4 groups
Standard	
magnification	5 ×
Magnification range	2 × – 10 ×
Aperture range	5.6 – 45
Corrected for	
wavelength range	380–700 nm
Diameter of original	160 mm $\varnothing$
Format size	90 mm × 120 mm
Dimensions	56 mm $\varnothing$ × 47.5 mm
Weight	190 g
Attachment size	
(dia × pitch)	52 mm $\varnothing$ × 0.75 mm
Rear mount size	
(dia $\times$ pitch)	39 mm $\varnothing$ $ imes$ 1/26"
	50 mm $\varnothing$ × 0.75 mm

### EL-NIKKOK 132WW 1:89 90 8 11 10 55 35 42



Order code	JNA202AA
Focal length	150 mm
Maximum	
aperture ratio	1:5.6
Picture angle	51°
Optical construction	6 elements in 4 groups
Standard	
magnification	4 ×
Magnification range	2 × - 8 ×
Aperture range	5.6–45
Corrected for	
wavelength range	380–700 nm
Diameter of original	180 mm $\varnothing$
Format size	100 mm × 130 mm
Dimensions	56 mm $\varnothing$ × 50.2 mm
Weight	210 g
Attachment size	
(dia × pitch)	52 mm $\varnothing$ × 0.75 mm
Rear mount size	
(dia × pitch)	39 mm $\varnothing$ × 1/25"
	50 mm $\varnothing$ × 0.75 mm



### **Reversing adapters**

Order code	ELUM1/JNW00101
Reversing adapter	40 mm f/4.0
EL Nikkor 40.5 mm $Ø$	50 mm f/2.8
	63 mm f/2.8
	75 mm f/4.0
	80 mm f/5.6
	105 mm f/5.6

ELUM3/JNW00401 Order code Reversing adapter 135 mm f/5.6 EL Nikkor 52 mm Ø 150 mm f/5.6

Order code Reversing adapter EL Nikkor 34.5 mm  $\emptyset$ (old model)

ELUM3/JNW00201 52 mm  $\emptyset$ 75 mm f/4.0

### Lens cover (EL lenses)

Order code Lens cover 40.5 mm Ø EL2/JND00201 40 mm f/4.0 50 mm f/2.8 63 mm f/2.8 75 mm f/4.0 80 mm f/5.6 105 mm f/5.6

Order code Lens cover 52 mm Ø

FA46/JAD00102 135 mm f/5.6 150 mm f/5.6

Order code EL1/JND00101 Lens cover 75 mm f/f4 34.5 mm Øfor EL-Nikkore (old model)

Order code Lens cover  $43 \text{ mm} \emptyset$ 

EL3/JND00301 135 mm f/5.6

### **Extension ring**

Order code	ELV/JXA16010
Extension ring	
for EL-Nikkor	50 mm-135 mm



### **TABULAR SUMMARY • TAVOLA SINOTTICA**

### Nikkor lenses for large-format cameras Obiettivi Nikkor per grande formato

Lens		Shift range/Tratto di spostamento						
Obiettivo		Aperture range Gamma dei diaframmi	Angle of coverage by f/22 Angolo di campo a f/22	Image circle by f/22 Cerchio d'immagine a f/22	Sinar DB			
Nikkor M 200 mm	f/8.0	8,0-64	55°	210 mm				
Nikkor M 300 mm	f/9.0	9,0–128	57°	325 mm	•			
Nikkor M 450 mm	f/9.0	9,0–128	52°	440 mm	•			
Nikkor W 105 mm	f/5.6	5,6-45	73°	155 mm				
Nikkor W 135 mm	f/5.6	5,6-64	73°	200 mm	•			
Nikkor W 150 mm	f/5.6	5,6-64	70°	210 mm	•			
Nikkor W 180 mm	f/5.6	5,6-64	70°	253 mm	•			
Nikkor W 210 mm	f/5.6	5,6-64	70°	295 mm	•			
Nikkor W 240 mm	f/5.6	5,6-64	70°	333 mm	•			
Nikkor W 300 mm	f/5.6	5,6-64	70°	420 mm	•			
Nikkor W 360 mm	f/6.5	5,6-64	69°	494 mm				
Nikkor SW 65 mm	f/4.0	4,0-45	105° f/16	170 mm f/16				
Nikkor SW 75 mm	f/4.5	4,5-45	106° f/16	200 mm f/16	•			
Nikkor SW 90 mm	f/4.5	4,5-64	105° f/16	235 mm f/16	•			
Nikkor SW 90 mm	f/8.0	8,0-64	105°	235 mm	•			
Nikkor SW 120 mm	f/8.0	8,0-64	105°	312 mm				
Nikkor SW 150 mm	f/8.0	8,0-64	106°	400 mm				
Nikkor T 270 mm	f/6.3 ED	6,3-64	32°	154 mm				
Nikkor T 360 mm	f/8.0 ED	8.0-64	32°	205 mm				
			24°					
Nikkor T 500 mm Nikkor T 600 mm	f/11.0 ED f/9.0 ED	9,0-64	24° 29°	210 mm 310 mm				
Nikkor T 720 mm	f/9.0 ED	9,0-64	29°	210 mm				
Nikkor T 800 mm	f/16.0 ED	10,0-64	22°	310 mm				
Nikkor T 1200 mm	f/12.0 ED	12,0-64	15°	310 mm				
INIKKUI I IZUU IIIIII	1/ 18.0 ED	10,0-04	כו	510 [[]]]				
Apo Micro Nikkor 120 mm	f/5.6 ED	5,6-45	55°	250 mm	•			
Apo Micro Nikkor 210 mm	f/5.6 ED	5,6-64	51°	400 mm	•			

### Nikkor M 200 mm f/8.0

Order code JGA707AA Focal length 200 mm Maximum 1:8.0 aperture ratio Optical construction 4 elements in 3 groups 8.0-64 Aperture range Angle of coverage f/5.6 45° Angle of 55° coverage f/22 Image circle f/5.6 166 mm Image circle f/22 210 mm (5 × 7") Shutter Copal no. 0 Shutter speeds 1-1/500 sec T, B Front mount size 54 mm Attachment size 52 mm  $\varnothing \times$  0.75 mm 31.5 mm Rear mount size Flange attachment size 32.5 mm Flange focal distance 193.7 mm **Overall length** 43 mm Weight 180 g



### Nikkor M 300 mm f/9.0

Order code Focal length Maximum	JGA703AA 300 mm
	1:9.0
aperture ratio	11510
Optical construction	
Aperture range	9.0–128
Angle of	
coverage f/9	55°
Angle of	
coverage f/22	57°
Image circle f/9	312 mm
Image circle f/22	325 mm (8 × 10")
Shutter	Copal no 1, special model
	for Nikon
Shutter speeds	1–1/400 sec, T, B
Flash	
sychronisation	X-contact
Front mount size	54 mm
Attachment size	$52 \text{ mm} \varnothing \times 0.75 \text{ mm}$
Rear mount size	42 mm
	42 11111
Flange attachment size	39 mm ∅ × 0.75 mm
	59 IIIII (2) × 0.75 IIIII
Flange	202.0
focal distance	293.8 mm
Overall length	43 mm
Weight	290 g



### Nikkor M 450 mm f/9.0

Order code JGA705AA Focal length 450 mm Maximum 1:9.0 aperture ratio Optical construction 4 elements in 3 groups Aperture range 9.0–128 Angle of coverage f/9 50° Angle of 52° coverage f/22 Image circle f/9 420 mm Image circle f/22 440 mm (10 × 12") Shutter Copal no. 3, special model for Nikon 1-1/125 sec, T, B Shutter speeds Flash sychronization X-contact Front mount size 70 mm Attachment size  $67 \text{ mm} \varnothing \times 0.75 \text{ mm}$ Rear mount size 60 mm Flange attachment size 62 mm Ø × 0.75 mm Flange 435.8 mm focal distance **Overall length** 55 mm Weight 640 g



### Nikkor W 105 mm f/5.6

Order code JGA615AA Focal length 105 mm Maximum 1:5.6 aperture ratio Optical construction 6 elements in 4 groups 5.6–45 Aperture range Angle of 60° coverage f/5.6 Angle 73° of coverage f/22 Image circle f/5.6 121 mm Image circle f/22 155 mm (4 × 5") Shutter Copal no. 0 Shutter speeds 1–1/500 sec, T, B Flash sychronization X-contact Front mount size 54 mm 52 mm  $\varnothing$  × 0.75 mm Attachment size Rear mount size 42 mm Flange 32.5 mm attachment size Flange focal distance 103.2 mm **Overall length** 44 mm Weight 185 g



### Nikkor W 135 mm f/5.6

Order code	JGA603AC
Focal length	135 mm
Maximum	
aperture ratio	1:5.6
<b>Optical construction</b>	6 elements in 4 groups
Aperture range	5.6–64
Angle	
of coverage f/5.6	60°
Angle	
of coverage f/22	73°
Image circle f/5.6	156 mm
Image circle f/22	200 mm (4 × 5")
Shutter	Copal no. 0, special model
	for Nikon
Shutter speeds	1–1/500 sec, T, B
Flash sychronization	X-contact
Front mount size	54 mm
Attachment size	52 mm $\varnothing$ × 0.75 mm
Rear mount size	42 mm
Flange	
attachment size	32.5 mm $\varnothing$ × 0.5 mm
Flange	
focal distance	133.8 mm
Overall length	46 mm
Weight	200 g



### Nikkor W 150 mm f/5.6

JGA605AB Order code Focal length 150 mm Maximum 1:5.6 aperture ratio Optical construction 6 elements in 4 groups 5.6–64 Aperture range Angle of coverage f/5.6 60° Angle of 70° coverage f/22 Image circle f/5.6 174 mm Image circle f/22 210 mm (13 × 18 cm) Shutter Copal no. 0, special model for Nikon 1-1/500 sec, T, B Shutter speeds Flash sychronization X-contact Front mount size 54 mm Attachment size 52 mm Ø × 0.75 mm Rear mount size 42 mm Flange attachment size  $32.5 \text{ mm} \varnothing \times 0.5 \text{ mm}$ Flange 149.2 mm focal distance **Overall length** 50 mm Weight 230 g



### Nikkor W 180 mm f/5.6

Order code	JGA607AA
Focal length	180 mm
Maximum	
aperture ratio	1:5.6
<b>Optical construction</b>	6 elements in 4 groups
Aperture range	5.6–64
Angle of	
coverage f/5.6	60°
Angle of	
coverage f/22	70°
Image circle f/5.6	208 mm
Image circle f/22	253 mm (13 × 18 cm)
Shutter	Copal no. 1, special model
	for Nikon
Shutter speeds	1–1/400 sec, T,B
Flash sychronization	X-contact
Front mount size	70 mm
Attachment size	67 mm $\varnothing$ × 0.75 mm
Rear mount size	54 mm
Flange	
attachment size	39 mm $\varnothing$ × 0.75 mm
Flange	
focal distance	178.8 mm
Overall length	60.5 mm
Weight	380 g



### Nikkor W 210 mm f/5.6

Order code JGA609AB Focal length 210 mm Maximum 1:5.6 aperture ratio Optical construction 6 elements in 4 groups 5.6–64 Aperture range Angle of coverage f/5.6 60° Angle 70° of coverage f/22 Image circle f/5.6 243 mm Image circle f/22 295 mm (16 × 21cm) Shutter Copal no. 1, special model for Nikon 1-1/400 sec. T, B Shutter speeds Flash sychronization X-contact Front mount size 70 mm Attachment size  $67 \text{ mm} \varnothing \times 0.75 \text{ mm}$ Rear mount size 60 mm Flange attachment size 39 mm  $\varnothing$  × 0.75 mm Flange focal distance 209.1 mm **Overall length** 69 mm Weight 460 g



### Nikkor W 240 mm f/5.6

Order code Focal length Maximum	JGA611AA 240 mm
aperture ratio	1:5.6
Optical construction	11010
Aperture range	5.6–64
Angle of	5.0 01
coverage f/5.6	60°
Angle of	
coverage f/22	70°
Image circle f/5.6	278 mm
Image circle f/22	333 mm (8 × 10")
Shutter	Copal no. 3, special model
	for Nikon
Shutter speeds	1–1/125 sec. T, B
Flash sychronization	X-contact
Front mount size	85 mm
Attachment size	82 mm $\varnothing$ × 0.75 mm
Rear mount size	60 mm
Flange	
attachment size	62 mm $\varnothing$ × 0.75 mm
Flange	
focal distance	227.3 mm
Overall length	77 mm
Weight	820 g



### Nikkor W 300 mm f/5.6

JGA613AA Order code Focal length 300 mm Maximum 1:5.6 aperture ratio Optical construction 6 elements in 4 groups 5.6-64 Aperture range Angle of coverage f/5.6 60° Angle of 70° coverage f/22 Image circle f/5.6 346 mm Image circle f/22 420 mm (10 × 12") Shutter Copal no. 3, special model for Nikon 1-1/125 sec, T,B Shutter speeds Flash sychronization X-contact Front mount size 100 mm Attachment size 95 mm  $\varnothing \times$  1 mm Rear mount size 80 mm Flange attachment size  $62 \text{ mm} \varnothing \times 0.75 \text{ mm}$ Flange 287.1 mm focal distance **Overall length** 94.5 mm Weight 1250 g



### Nikkor W 360 mm f/6.5

Order code	JGA617AA
Focal length	360 mm
Maximum	
aperture ratio	1:6.5
Optical construction	6 elements in 4 groups
Aperture range	6.5-64
Angle of	
coverage f/6.5	60°
Angle of	
coverage f/22	69°
Image circle f/6.5	415 mm
Image circle f/22	494 mm (11 × 14")
Shutter	Copal no. 3, special model
	for Nikon
Shutter speeds	1–1/125 sec, T, B
Flash sychronisation	
Front mount size	100 mm
Attachment size	$95 \text{ mm} \oslash \times 1 \text{ mm}$
Rear mount size	80 mm
Flange	oo min
attachment size	$62 \text{ mm} \varnothing \times 0.75 \text{ mm}$
Flange	02 mm © × 0.75 mm
focal distance	345.8 mm
io cai albitante	5 1510 1111
Overall length	107.5 mm
Weight	1420 g



### Nikkor SW 65 mm f/4.0

Order code JGA501AB Focal length 65 mm Maximum 1:4.0 aperture ratio Optical construction 7 elements in 4 groups 4.0-45 Aperture range Angle of coverage f/4 80° Angle of 105° coverage f/16 Image circle f/4 110 mm Image circle f/16  $170 \text{ mm} (4 \times 5'')$ Shutter Copal no. 0, special model for Nikon 1-1/500 sec, T, B Shutter speeds Flash sychronization X-contact Front mount size 70 mm Attachment size 67 mm Ø × 0.75 mm Rear mount size 54 mm Flange attachment size 32.5 mm  $\varnothing \times 0.5$  mm Flange focal distance 70.8 mm **Overall length** 67 mm Weight 370 q



### Nikkor SW 75 mm f/4.5

Order code	JGA503AB
Focal length	75 mm
Maximum	
aperture ratio	1:4.5
<b>Optical construction</b>	7 elements in 4 groups
Aperture range	4.5–45
Angle of	
coverage f/4.5	80°
Angle of	
coverage f/16	106°
Image circle f/4.5	126 mm
Image circle f/16	200 mm (120 × 166 mm)
Shutter	Copal no. 0, special model
	for Nikon
Shutter speeds	1–1/500 sec, T, B
Flash sychronization	X-contact
Front mount size	70 mm
Attachment size	67 mm $\varnothing$ × 0.75 mm
Rear mount size	60 mm
Flange	
attachment size	32.6 mm $\varnothing$ × 0.5 mm
Flange	
focal distance	81.3 mm
Overall length	73.5 mm
Weight	420 g



### Nikkor SW 90 mm f/4.5

JGA505AC Order code Focal length 90 mm Maximum 1:4.5 aperture ratio **Optical construction** 7 elements in 4 groups 4.5–54 Aperture range Angle of coverage f/4.5 80° Angle of 105° coverage f/16 Image circle f/4.5 154 mm Image circle f/16 235 mm (13 × 18 cm) Shutter Copal no. 0, special model for Nikon 1-1/500 sec, T, B Shutter speeds Flash sychronization X-contact Front mount size 85 mm Attachment size 82 mm Ø × 0.75 mm Rear mount size 70 mm Flange attachment size 32.5 mm  $\varnothing$  × 0.5 mm Flange 97.4 mm focal distance **Overall length** 86.7 mm Weight 600 g



### Nikkor SW 90 mm f/8.0

Order code	JGA507AB
Focal length	90 mm
Maximum	
aperture ratio	1:8.0
<b>Optical construction</b>	8 elements in 4 groups
Aperture range	8.0–64
Angle of	
coverage f/8.0	80°
Angle of	
coverage f/22	105°
Image circle f/8.0	154 mm
Image circle f/22	235 mm (13 × 18 cm)
Shutter	Copal no. 0, special model
	for Nikon
Shutter speeds	1–1/500 sec, T, B
Flash sychronization	X-contact
Front mount size	70 mm $\varnothing$
Attachment size	67 mm $\varnothing$ × 0.75 mm
Rear mount size	60 mm
Flange	
attachment size	32.5 mm $\varnothing$ × 0.5 mm
Flange	
focal distance	97 mm
Overall length	71 mm
Weight	360 g



### Nikkor SW 120 mm f/8.0

Order code JGA509AB Focal length 120 mm Maximum 1:8.0 aperture ratio Optical construction 8 elements in 4 groups 8.0-64 Aperture range Angle of coverage f/8 80° Angle of 105° coverage f/22 Image circle f/8 200 mm Image circle f/22 312 mm (8 × 10") Shutter Copal no. 0, special model for Nikon 1-1/500 Sec, T, B Shutter speeds Flash sychronization X-contact Front mount size 80 mm Attachment size 77 mm  $\varnothing$  × 0.75 mm Rear mount size 80 mm Flange attachment size 32.5 mm  $\varnothing \times 0.5$  mm Flange focal distance 130.7 mm **Overall length** 92.5 mm Weight 610 q



### Nikkor SW 150 mm f/8.0

Order code	JGA511AA
Focal length	150 mm
Maximum	
aperture ratio	1:8.0
<b>Optical construction</b>	8 elements in 4 groups
Aperture range	8–64
Angle of	
coverage f/8	80°
Angle of	
coverage f/22	106°
Image circle f/8	253 mm
Image circle f/22	400 mm (10 × 12")
Shutter	Copal no. 1, special model
	for Nikon
Shutter speeds	1–1/400 sec, T, B
Flash sychronization	X-contact
Front mount size	100 mm
Attachment size	95 mm $\varnothing$ × 1 mm
Rear mount size	100 mm
Flange	
attachment size	39 mm $\varnothing$ × 0.75 mm
Flange	
focal distance	165.9 mm
Overall length	115.5 mm
Weight	950 g



### Nikkor T 270 mm f/6.3 ED

Order code JGA801AA Focal length 270 mm Maximum 1:6.3 aperture ratio Optical construction 5 elements in 4 groups 6.3–64 Aperture range Angle of 21° coverage f/5.3 Angle of 32° coverage f/22 Image circle f/6.3 100 mm Image circle f/22  $154 \text{ mm} (4 \times 5'')$ Shutter Copal no. 1, special model for Nikon 1-1/400 sec, T, B Shutter speeds Flash sychronization X-contact Front mount size 70 mm Attachment size  $67 \text{ mm} \varnothing \times 0.75 \text{ mm}$ Rear mount size 42 mm Flange attachment size  $39 \,\mathrm{mm}\,arnothinspace \times 0.75 \,\mathrm{mm}$ Flange focal distance 182.6 mm **Overall length** 98 mm Weight 400 q



### Nikkor T 360 mm f/8.0 ED

Order code	JGA803AA
Focal length	360 mm
Maximum	
aperture ratio	1:8.0
<b>Optical construction</b>	5 elements in 4 groups
Aperture range	8–64
Angle of	
coverage f/8	24°
Angle of	
coverage f/22	32°
Image circle f/8	154 mm
Image circle f/22	205 mm (13 × 18 cm)
Shutter	Copal no. 1, special model
	for Nikon
Shutter speeds	1–1/400 sec, T, B
Flash sychronization	X-contact
Front mount size	70 mm
Attachment size	67 mm $\varnothing$ × 0.75 mm
Rear mount size	60 mm
Flange	
attachment size	39 mm $\varnothing$ × 0.75 mm
Flange	
focal distance	260.2 mm
Overall length	124 mm
Weight	450 g
-	-



### ED-Nikkor T 500 mm f/11.0

JGA806AA Order code Focal length 500 mm Maximum aperture ratio 1:11 Optical construction 6 elements in 4 groups Aperture range 11–64 Angle of 17° coverage f/11 Angle of 24° coverage f/22 Image circle f/11 154 mm Image circle f/22 210 mm (13 × 18 cm) Shutter Copal no. 1, special model for Nikon 1-1/400 sec, T, B Shutter speeds Flash sychronization X-contact Front mount size 70 mm Attachment size  $67 \text{ mm} \varnothing \times 0.75 \text{ mm}$ Rear mount size 54 mm Flange  $39 \text{ mm} \varnothing \times 0.75 \text{ mm}$ attachment size Flange 349.9 mm focal distance **Overall length** 128.5 mm Weight 760 g

# NIRKOG-1 \* ED 300mm 1

### ED-Nikkor T 600 mm f/9.0

Order code	JGA809AA
Focal length	600 mm
Maximum	
aperture ratio	1:9
<b>Optical construction</b>	6 elements in 5 groups
Aperture range	9–64
Angle of	
coverage f/9	19°
Angle of	
coverage f/22	29°
Image circle f/9	200 mm
Image circle f/22	310 mm (16 × 21 cm)
Shutter	Copal no. 3, special model
	for Nikon
Shutter speeds	1–1/125 sec, T, B
Flash sychronization	X-contact
Front mount size	90 mm
Attachment size	86 mm $\varnothing$ × 1 mm
Rear mount size	80 mm
Flange	
attachment size	62 mm $\varnothing$ × 0.75 mm
Flange	
focal distance	409.6 mm
Overall length	175.5 mm
Weight	1550 g



### ED-Nikkor T 720 mm f/16.0

JGA820AA Order code Focal length 720 mm Maximum aperture ratio 1:16 **Optical construction** 7 elements in 4 groups 16–64 Aperture range Angle of coverage f/16 12° Angle of 17° coverage f/22 Image circle f/16 154 mm Image circle f/22  $210 \text{ mm} (5 \times 7'')$ Shutter Copal no. 1, special model for Nikon 1-1/400 sec, T, B Shutter speeds Flash synchronization X-contact Front mount size 70 mm Attachment size 67 mm Ø × 0.75 mm Rear mount size 54 mm Flange attachment size  $39 \text{ mm} \varnothing \times 0.75 \text{ mm}$ Flange focal distance 469.2 mm Overall length 124.1 mm Weight 780 g



### ED-Nikkor T 800 mm f/12.0

Order code Focal length	JGA812AA 800 mm
Maximum aperture ratio	1:12
Optical construction	7 elements in 5 groups
Aperture range	12–64
Angle of	
coverage f/12	14°
Angle of	
coverage f/22	22°
Image circle f/12	200 mm
Image circle f/22	310 mm (16 × 21 cm)
Shutter	Copal no. 3, special model
	for Nikon
Shutter speeds	1–1/125 sec, T, B
Flash synchronization	X-contact
Front mount size	90 mm
Attachment size	86 mm $\varnothing \times$ 1 mm
Rear mount size	70 mm
Flange	
attachment size	62 mm $\varnothing$ × 0.75 mm
Flange	
focal distance	528.3 mm
Overall length	176.5 mm
Weight	1500 g
-	5



### ED-Nikkor T 1200 mm f/18.0

Order code	
Focal length	
Maximum	
aperture ratio	
Optical constuction	
Aperture range	
Angle of	
coverage f/18	
Angle of	
coverage f/22	
Image circle f/18	
Image circle f/22	
Shutter	
Shutter speeds	
Flash	
synchronization	
Front mount size	
Attachment size	
Rear mount size	
Flange	
attachment size	
Flange	
focal distance	
Overall length	
Weight	

JGA815AA 1200 mm 1:18 8 elements in 5 groups 18–64 10° 15° 200 mm 310 mm (8 × 10″) Copal no. 3, special model for Nikon

1–1/125 sec, T, B X-contact 100 mm 85 mm  $\varnothing$  × 1 mm

60 mm

62 mm  $\varnothing$  × 0.75 mm

755.7 mm 179 mm 1480 g



### Rear Lens Groups for Nikkor T Large-format Lenses Elementi ottici posteriori per obiettivi ED Nikkor T per grande formato

By changing the rear lens group in the following Nikkor T large-format lenses, it is possible to after the focal lengh without any loss of quality.

Sostituendo il gruppo di elementi ottici posteriori degli obiettivi Nikkor T dell'elenco seguente, si può, senza alcuna perdita di qualità, modificarne la lunghezza focale.

Basic Lens	Interchangeable Lens group	Ordering code	New focal length	Obiettivo di base	Elemento ottico posteriore	Codice di comando	Focale ottenuta
360 mm f/8.0 ED	500 mm f/11.0 ED	JGA808AA	500 mm f/11.0 ED	360 mm f/8.0 ED	500 mm f/11.0 ED	JGA808AA	500 mm f/11.0 ED
360 mm f/8.0 ED	720 mm f/16.0 ED	JGA821AA	720 mm f/16.0 ED	360 mm f/8.0 ED	720 mm f/16.0 ED	JGA821AA	720 mm f/16.0 ED
500 mm f/11.0 ED	360 mm f/8.0 ED	JGA805AA	360 mm f/8.0 ED	500 mm f/11.0 ED	360 mm f/8.0 ED	JGA805AA	360 mm f/8.0 ED
500 mm f/11.0 ED	720 mm f/16.0 ED	JGA821AA	720 mm f/16.0 ED	500 mm f/11.0 ED	720 mm f/16.0 ED	JGA821AA	720 mm f/16.0 ED
600 mm f/9.0 ED	800 mm f/12.0 ED	JGA814AA	800 mm f/12.0 ED	600 mm f/9.0 ED	800 mm f/12.0 ED	JGA814AA	800 mm f/12.0 ED
600 mm f/9.0 ED	1200 mm f/18.0 ED	JGA816AA	1200 mm f/18.0 ED	600 mm f/9.0 ED	1200 mm f/18.0 ED	JGA816AA	1200 mm f/18.0 ED
720 mm f/16.0 ED	360 mm f/8.0 ED	JGA805AA	360 mm f/8.0 ED	720 mm f/16.0 ED	360 mm f/8.0 ED	JGA805AA	360 mm f/8.0 ED
720 mm f/16.0 ED	500 mm f/11.0 ED	JGA808AA	500 mm f/11.0 ED	720 mm f/16.0 ED	500 mm f/11.0 ED	JGA808AA	500 mm f/11.0 ED
800 mm f/12.0 ED	600 mm f/9.0 ED	JGA811AA	600 mm f/9.0 ED	800 mm f/12.0 ED	600 mm f/9.0 ED	JGA811AA	600 mm f/9.0 ED
800 mm f/12.0 ED	1200 mm f/18.0 ED	JGA816AA	1200 mm f/18.0 ED	800 mm f/12.0 ED	1200 mm f/18.0 ED	JGA816AA	1200 mm f/18.0 ED
1200 mm f/18.0 ED	600 mm f/9.0 ED	JGA811AA	600 mm f/9.0 ED	1200 mm f/18.0 ED	600 mm f/9.0 ED	JGA811AA	600 mm f/9.0 ED
1200 mm f/18.0 ED	800 mm f/12.0 ED	JGA814AA	800 mm f/12.0 ED	1200 mm f/18.0 ED	800 mm f/12.0 ED	JGA814AA	800 mm f/12.0 ED

### Apo-Micro-Nikkor ED 120 mm f/5.6

JGA901AB Order code Focal length 120 mm Maximum aperture ratio 1:5,6 Optical construction 8 elements in 4 groups Aperture range 5,6–45 Angle of 47° coverage f/5.6 Angle of coverage f/22 55° Image circle (5.6 M 1 :1) 210 mm Image circle (22 M 1 :1) 250 mm Shutter Copal no. 0, special model for Nikon Shutter speeds 1-1/500 sec, T, B Flash synchronization X-contact Front mount size 54 mm 52 mm  $\varnothing \times 0.75$  mm Attachment size Rear mount size 42 mm Flange 32.5 × 0.5 mm attachment size Flange 115.9 mm focal distance **Overall length** 64 mm Weight 295 q



### Apo-Micro-Nikkor ED 210 mm f/5.6

IGA903AA Order code Focal length 210 mm Maximum aperture ratio 1:5.6 Optical construction 8 elements in 4 groups Aperture range 5,6-64 Angle of coverage f/5.6 41° Angle of coverage 51° f/22 Image circle (f/5.6 M 1 :1) 310 mm Image circle (f/22 M 1 :1) 400 m (10 × 12") Shutter Copal no. 1, special model for Nikon Shutter speeds 1-1/400 sec, T, B Flash synchronization X-contact Front mount size 70 mm 67 mm Ø × 0.75 mm Attachment size Rear mount size 70 mm Flange 39 mm ∅ × 0.75 mm attachment size Flange focal distance 202,7 mm 104.5 mm Overall length Weight 850 g



	Tabular summary Tavola sinottica	Nikon	SB-23 AF Flash unit SB-23 Lampeggiatore AF
	SB-28 AF Flash SB-28 Lampeggiatore AF		SB-16 Flash unit SB-16 Lampeggiatore
Hitor Hitor	SB-28 DX AF Flash SB-28 DX Lampeggiatore AF		SB-17 Flash unit SB-17 Lampeggiatore
Nikon	SB-27 AF Flash SB-27 Lampeggiatore AF		SB-29 AF Macro flash SB-29 AF Lampeggiatore Macro
NIKOT	SB-50 DX AF Flash SB-50 DX Lampeggiatore AF		Flash accessories Accessori di lampeggiatore
	SB-22s AF Flash SB-22s Lampeggiatore AF		

### **TABULAR SUMMARY • TAVOLA SINOTTICA**

Nikon	SB-28	SB-28DX	SB-27	SB-50DX	SB-22S	SB-23	SB-16A	SB-16B	SB-17	SB-29
Guide number (ISO 100) Numero guida (ISO 100)	18-50	18–50	34	12–26	25	20	32	32	25	11
Angle of coverage (mm) Copertura di campo (mm)	18-85	18-85	24–50	14–50	28-35	35	24–85	24-85	28-35	H: 20 V: 24
Rotatable reflector Parabola ruotabile	•	•	-	•	-	-	-	-	-	-
Inclinable reflector Parabola inclinabile	•	•	•	•	•	_	•	•	•	-
Zoom-Reflector Parabola zoom	•	•	•	•	-	-	-	-	-	-
Automatic zoom setting Regolazione zoom automatica	•	•	F5/F90X/F70	•	-	-	-	-	-	-
Sync terminal Contatto di sincronizzazione	•	•	•	-	•	-	-	-	•	•
TTL-terminal (for additional flash) Contatto TTL (per un secondo flash)	•	•	-	-	-	-	•	•	•	•
Terminal for external battery pack SD-7/SD-8 Contatto per alimentatore esterno SD-7/SD-8	•	•	•	-	•	-	•	•	-	•
AF-Illuminator Illuminatore AF	•	•	•	٠	•	•	-	-	-	•
LCD-Display Display-LCD	•	•	•	•	-	_	_	-	-	-
Stroboscopic flash Flash stroboscopico	•	•	-	-	-	-	-	-	-	-
STBY position Commutatore STBY	•	•	•	٠	•	•	-	-	-	•
Dimensions (mm) H Dimensioni (mm) A	128	128	70	63	105	64	166,5	144	42	133
W L	69	69	107	107	80	67	82	82	101	119
D P	90	90	97	105	68	84	100	100	90	28,5
Weight (without batteries) Peso (senza batterie)	320 g	320 g	340 g	235 g	250 g	140 g	485 g	445 g	300 g	410 g

	Camera	SB-28	SB-28DX	SB-27	SB-50DX	SB-22S	SB-23	SB-16A	SB-16B	SB-17	SB-29	Prodotto	
	Nikon D1 series	_	_	_	-	-	-	-	-	_	-	Nikon D1 Series	
	TTL-3D multi-sensor balanced fill flash (with AF-D lenses)	_	•	_	•	_	_	_	-	_	_	Fill-Flash con bilanciamento a sensore multiplo 3D (con obiettivi AF-D)	
	TTL multi-sensor balanced fill flash	-	•	-	•	-	-	-	-	-	-	Fill-Flash con bilanciamento a sensore multiplo 3D	
TTL	Matrix-balanced TTL fill flash	_	•	-	•	-	-	-	-	-	-	Bilanciamento del bianco TTL attra- verso la misurazione color matrix 3D	TTL
	TTL auto flash	-	•	-	•	-	-	-	-	-	-	Modalità auto flash TTL	
	TTL flash synchronisation at 1/500 sec	_	•	-	•	-	_	_	_	-	_	Synchro Flash TTL rapido 1/500 s	
Α	Computer auto flash	٠	•	•	-	•	-	-	•	-	-	Modalità flash auto	Α
	Manual control	٠	•	•	•	•	•	-	•	-	•	Modalità flash manuale	
	Rear-curtain synchronisation	•	•	•	•	٠	•	-	•	-	•	Sincronizzazione sul secondo (Rear)	1
М	Slow synchronisation	•	•	•	•	•	•	-	•	-	•	Sincronizzazione lenta (Slow)	M
	FP high-speed synchronisation 1/250 sec – 1/4000 sec	•	•	_	•	_	_	_	_	_	_	Sincronizzazione ultra rapida da 1/250 s a 1/4000 s	
	Nikon F5											Nikon F5	
	TTL-3D multi-sensor balanced fill flash (with AF-D lenses)	٠	•	٠	•	-	-	-	-	_	•	Fill-Flash con bilanciamento a sensore multiplo 3D (con obiettivi AF-D)	
TTL	TTL multi-sensor balanced fill flash	٠	•	•	•	-	-	-	-	-	•	Fill-Flash con bilanciamento a sensore multiplo 3D	TTL
	Matrix-balanced TTL fill flash	-	-	-	-	-	-	-	-	-	•	Bilanciamento del bianco TTL attra- verso la misurazione color matrix 3D	]
	TTL auto flash	•	•	•	•	•	•	-	•	-	•	Modalità auto flash TTL	
А	Computer auto flash	٠	•	•		٠	-	-	•	I	-	Modalità auto flash	А
	Manual control	•	•	•	•	٠	•	-	•	-	•	Modalità flash manuale	
	Rear-curtain synchronisation	•	•	•	•	٠	•	-	•	-	•	Sincronizzazione sul secondo (Rear)	
	Slow synchronisation	•	•	•	•	٠	•	-	•	-	•	Sincronizzazione lenta (Slow)	
M	Repeating flash (strobo-effect)	•	•	-	-	-	-	-	-	-	-	Flash stroboscopico	М
	TTL high-speed balanced at 1/300 sec	•	•	•	•	٠	•	-	-	-	-	Synchro Flash TTL rapido 1/300 s	
	FP high-speed synchronisation 1/250 sec – 1/4000 sec	•	•	-	-	-	-	-	-	-	-	Synchro flash ultra rapido FP da 1/250 s a 1/4000 s	
	Nikon F100											Nikon F100	
	TTL-3D multi-sensor banlanced fill flash (with AF-D lenses)	•	•	•	•	-	-	-	-	-	•	Fill-Flash con bilanciamento a sensore multiplo 3D (con obiettivi AF-D)	
TTL	TTL multi-sensor balanced fill flash	•	•	•	•	٠	•	-	-	-	•	Fill-Flash con bilanciamento a sensore multiplo 3D	TTL
	Matrix-balanced TTL fill flash	•	•	•	•						•	Bilanciamento del bianco TTL attra- verso la misurazione color matrix 3D	
	TTL auto flash	•	•	•	•	•	•	-	•	-	•	Modalità auto flash TTL	
А	Computer auto flash	•	•	•	-	•	-	-	•	I	-	Modalità auto flash	А
	Manual control	•	•	•	•	٠	•	-	•	-	•	Modalità flash manuale	_
	Rear-curtain synchronisation	•	•	٠	•	•	•	-	•	-	•	Sincronizzazione sul secondo (Rear)	
м	Slow synchronisation	•	•	•	•	•	•	-	•	I	•	Sincronizzazione lenta (Slow)	М
	Repeating flash (strobo-effect)	•	•	-	-	-	-	-	-	-	-	Flash stroboscopico	1
	FP high-speed synchronisation 1/250 sec – 1/4000 sec	•	•	-	-	-	_	-	-	-	_	Synchro flash ultra rapido FP da 1/250 s a 1/4000 s	

	Camera	SB-28	SB-28DX	SB-27	SB-50DX	SB-22S	SB-23	SB-16A	SB-16B	SB-17	SB-29	Prodotto	
	Nikon F90X	-	-	-	_	_	_	-	-	-	-	Nikon F90X	
	TTL-3D multi-sensor balanced fill flash (with AF-D lenses)	٠	•	٠	•	_	_	_	•	_	•	Fill-Flash con bilanciamento a sensore multiplo 3D (con obiettivi AF-D)	
TTL	TTL multi-sensor balanced fill flash	٠	•	•	•	-	-	-	•	-	•	Fill-Flash con bilanciamento a sensore multiplo 3D	
	Matrix-balanced TTL fill flash	-	_	-	•	-	-	-	•	-	•	Bilanciamento del bianco TTL attra- verso la misurazione color matrix 3D	
	TTL auto flash	•	•	•	•	•	•	-	•	-	•	Modalità auto flash TTL	1
Α	Computer auto flash	•	•	•	-	-	-	-	•	-	-	Modalità auto flash	A
	Manual control	٠	•	•	•	-	-	-	•	-	•	Modalità flash manuale	
	Rear-curtain synchronisation	•	•	•	•	•	•	_	•	_	•	Sincronizzazione sul secondo (Rear)	
м	Slow synchronisation	٠	•	•	•	•	•	-	•	-	•	Sincronizzazione lente (Slow)	м
	Repeating flash (strobo-effect)	٠	•	-	-	-	-	-	-	-	-	Flash stroboscopico	1
	FP high-speed synchronisation 1/250 sec – 1/4000 sec	٠	•	-	_	-	_	-	-	-	_	Synchro flash ultra rapido FP da 1/250 s a 1/4000 s	
	Nikon F80											Nikon F80	
	TTL-3D multi-sensor balanced fill flash (with AF-D lenses)	•	•	•	•	-	-	-	-	-	•	Fill-Flash con bilanciamento a sensore multiplo 3D (con obiettivi AF-D)	
TTL	TTL multi-sensor balanced fill flash	٠	•	٠	•	•	•	-	-	-	•	Fill-Flash con bilanciamento a sensore multiplo 3D	_πL
	Matrix-balanced TTL fill flash	•	•	•	•	_	_	_	_	_	•	Bilanciamento del bianco TTL attra- verso la misurazione color matrix 3D	
	TTL auto flash	٠	•	٠	•	٠	•	-	•	-	•	Modalità auto flash TTL	1
Α	Computer auto flash	٠	•	•	-	•	-	-	•	-	-	Modalità auto flash	A
	Manual control	•	•	•	•	•	•	-	•	-	•	Modalità flash manuale	
м	Rear curtain synchronisation	٠	•	٠	•	•	•	_	•	-	•	Sincronizzazione sul secondo (Rear)	м
	Slow synchronisation	٠	•	-	•	•	•	-	•	-	•	Sincronizzazione lenta (Slow)	1
	Repeating flash (strobo-effect)	٠	•	-	-	-	-	-	-	-	-	Flash stroboscopico	]
	Nikon F65											Nikon F65	
TTL	3D matrix-balanced TTL fill flash	٠	•	٠	•	•	•	-	•	-	•	Fill-Flash con bilanciamento a sensore multiplo 3D	TTL
	TTL auto flash	٠	•	•	•	•	-	-	•	-	-	Modalità auto flash TTL	1
Α	Computer auto flash	٠	•	٠	•	•	-	-	•	-	-	Modalità auto flash	Α
	Manual control	•	•	•	•	•	•	-	•	-	•	Modalità flash manuale	
м	Rear-curtain synchronisation	٠	•	٠	•	•	•	_	•	-	•	Sincronizzazione sul secondo (Rear)	м
	Slow synchronisation	•	•	•	•	•	•	-	•	-	•	Sincronizzazione lenta (Slow)	1
	Repeating flash (strobo-effect)	٠	•	-	-	-	-	-	-	-	-	Flash stroboscopico	]
	Nikon F3											Nikon F3	
TTL	TTL auto flash	-	-	-	-	-	-	•	-	•	-	Modalità flash auto TTL	TTL
Α	Computer auto flash	-	-	-	-	-	-	•	-	•	-	Modalità flash auto	A
М	Manual control	-	-	-	-	-	-	•	-	•	-	Modalità flash manuale	М
	Nikon FM 3A											Nikon FM 3A	
TTL	TTL auto flash	٠	•	•	•	•	•	-	•	-	•	Modalità flash auto TTL	TTL
Α	Computer auto flash	•	•	•	-	•	-	-	•	-	-	Modalità flash auto	A
М	Manual control	٠	•	•	•	•	•	-	•	-	•	Modalità flash manuale	M

### AF Speedlight SB-28

Order code	FSA02911
Electronic	Automatic insulated Gate
construction	Bipolar Transistor (IGBT) and
	series circuitry; TTL auto flash mode with Nikon D1, F5, F90X,
	F80, F65; computer auto flash
	with any Nikon SLR (with wide
	flash unit coupler AS-4 or AS-7 with Nikon F3)
AF assist illumination	Automatically fires LED beam
	toward subject when perform-
	ing autofocus in dim light or in the dark with Nikon AF
	cameras
Angle of coverage	6 settings, plus 2 with built-in
	wide flash adapter; in horizon-
	tal or vertical position 18 or 20 mm (wide-angle flash diffuser
	card) 24, 28, 35, 50, 70 and 85
	mm flash head in standard po-
	sition; automatic zoom setting with Nikon D1, F5, F4, F100,
	F90X, F80, F65, F60, Pronea S
	and Pronea 600i using AF len-
	ses; manually set with other cameras
Bounce capability	Flash head tilts down to 7° or
,	up to 90°; rotates horizontally
	180°; built-in diffuser card un- folds to create catchlights in
	subject's eves in bounce-flash
	and close-up photography
Built-in diffuser card	J I I J I I I I I I I I I I I I I I I I
Guide number	card up to 18 mm (ISO 100/21°): 36 (in zoom-
	head position 35 mm)
Flash modes	OFF/M/AUTO
	Auto: TLL auto flash: all Nikon cameras with TTL flash control
	Matrix balanced fill flash with
	all Nikon AF cameras with ma-
	trix exposure metering and use of AF Nikkor lenses (with F5
	cameras also with AI lenses)
	3D multi-sensor balanced fill
	flash with Nikon F100, F90X, F80 using D-type AF lenses
	A: automatic flash control with
	built-in sensor; available aper-
	tures: from f/2.8 to f/8 (ISO 100/21°)
	<b>M</b> : with manual flash, the flash
	output can be selected between
	full output to 1/16; automatic switch-off after approx. 80 sec.
	after last use of the camera or
_	flash unit, if stand-by is activated
Number of flashes	Depends on automatic features
	used: approx. 150 if auto is switched off, without use of AF
	assist illuminator, zoom-head
	position adjustment, or LCD
	panel illumination (using fresh alkaline-manganese batteries)
Flash recycling time	alkaline-manganese batteries) Approx. 6.5 sec. depending on
	alkaline-manganese batteries)



LCD panel	Information or symbols: red-eye reduction; zoom head position, flash modes, under exposure, aperture, indirect flash, expo- sure compensation, distance measurement system (m or ft), light output/compensation and film speed
Film speed range	With TTL auto: ISO 25/15° to 1000/31°
Ready light	Lights up: unit is ready to fire; blinks: flash-output is too low
Flash exposure	Exposure compensation is
compensation	possible in 1/3 steps from +1
Monitor pre-flash	to –3 EV Used with Nikon F100, F90X
Red-eye reduction	cameras, the speedlight initi- ates multiple test flashes to de- tect the scene's special features Used with Nikon D1, F100, F90X, F80 cameras, the speed- light fires a pre-flash to prevent red eyes
Hand release	Provided
Safety lock	Fixes the SB-28 to the Nikon
Terminals	camera's accessory shoe For external power source and
Terminuis	sync cord
Power source	Four 1.5 V (LR6) alkaline or 1.5 V (FR6) lithium batteries; or 1.2 V NiCD battery pack (KR-AA), or 1.2 V NiMH battery pack; external battery pack SD-8A (optional)
Dimensions	Approx. $69 \times 128 \times 90 \text{ mm}$
	$(W \times H \times D)$
Weight	320 g (without batteries)



Supplied with: Bag SS-28

Optional accessories: External battery pack SD-8A

### AF Speedlight SB-28DX

Order code Electronic construction	FSA03101 Automatic insulated Gate Bipolar Transistor (IGBT) and
TTL auto flash mode	series circuitry TTL auto flash mode with Ni- kon F5, F4, F90, F90X, F80, F65, F60); computer auto flash with any Nikon SLR camera (with flash unit coupler AS-4 or AS-7
AF assist illumination	with Nikon F3) Automatically fires LED beam toward subject when perform- ing autofocus in dim light or in the dark with Nikon AF cameras
Angle of coverage	6 settings, plus 2 with built-in wide-angle diffuser card; in ho- rizontal or vertical position 18 or 20 mm; (with diffuser card) 24, 28, 35, 50, 70 and 85 mm, flash head in standard position; automatic zoom setting with Nikon D1, DiX, D1H, F5, F100, F90X, F80, F65, Pronea S and Pronea 600i using AF lenses; manually set with other came- ras
Bounce capability	Flash head tilts down to 7° or up to 90°; rotates horizontally 180°
Built-in diffuser card	
Guide number	(ISO 100/21°): 36 (zoom-head
Flash modes	position 35 mm) 3D multi-sensor balanced fill flash for Nikon D1, D1X (using D-type AF lenses); apart from monitor pre-flash, distance information is also included in metering Multi-sensor balanced fill-flash for D1, D1X, D1H (with AF Nik- kor lenses other than D-type); monitor pre-flash meters expo- sure of main subject and ma- trix meter meters expo- sure of main subject and ma- trix meter meters expo- sure of main subject and ma- trix meter meters expo- sure of main subject and background Centre-weighted fill flash for D1, D1X, D1H (AI-type Nikkor lenses); balanced exposure of main subject and background is based on monitor pre-flash results (for exposure of main subject), and centre-weighted exposure metering (for expo- sure of background) Standard TTL flash for D1, D1X, D1H (with all compatible len- ses); auto switch-off approx. 80 sec. after last use of camera and flash unit, if stand-by is activated
Number of flashes	activated Varies according to auto mode used: approx. 150 if auto is switched off, without use of AF assist illuminator or zoom-head position adjustment (using fresh alkaline-manganese bat- teries)



Flash recycling time	Approx. 6.5 sec. depending on the type of auto mode used
Flash shooting range LCD panel	0,6 to 18 m (ISO 100/21°) Information or symbols: red-eye reduction; zoom-head position, flash modes, under exposure, aperture, indirect flash, expo- sure compensation, distance measurement system (m or ft), light output/compensation and film speed
Film speed range	With TTL auto flash: ISO 25/15° to 1000/31°
Ready light	Lights up: unit is ready to fire; blinks: flash-output is too low
Flash exposure compensation	Exposure compensation is possible in 1/3 steps from +1 to -3 EV
Monitor pre-flash Red-eye reduction	Used with Nikon F100, F90X cameras, the speedlight initia- tes multiple test flashes to de- tect the scene's special features Used with Nikon D1, D1X, D1H,
	F100, F90X, F80 cameras, the speedlight fires a pre-flash to prevent red eyes
Hand release	Provided
Safety lock	Fixes the SB-28DX to the Nikon
	camera's accessory shoe
Terminals	For external power source and
Power source	sync cord Four 1.5 V (LR6) alkaline or 1.5 V (FR6) lithium batteries, or 1.2 V NiCD battery pack (KR-AA) or 1.2 V NiMH battery pack; external battery pack SD-8A (optional)
Dimensions	Approx. $69 \times 128 \times 90 \text{ mm}$ (W × H × D)
Weight	Approx. 320 g (without batteries)



Supplied with: Bag SS-28

Optional accessories: External battery pack SD-8A

### Electronic flash unit SB-27

Order code Light emission control AF illuminator Zoom capability	FSA02711 insulated gate bipolar transistor (IBGT) and series cir- cuitry; automatic flash expo- sure control (TTL) for all Nikon cameras with TTL sensor; auto- matic light control for other Nikon cameras with Nikon AF camera, auto- matically fires LED beam to- ward subject when light condi- tions are insufficient for auto- matic focusing in horizontal position: 24, 28, 35 and 50 mm; in vertical position: 35, 50 and 70 mm; automatic power zoom with Nikon F4/F90X/F90/F801S/F801/F70
	using AF lenses; manually set with other cameras
Flash head	rotates 180° from one horizon- tal position to the other
Built-in diffuser	unfolds to produce catchlight in bounce flash photography
Guide number	and for close-ups 34 (zoom head position 50 mm, ISO 100)
Number of flashes	depends on automatic features used; approx. 140 in manual mode, without use of AF illumi- nator or zoom operation, using fresh alkaline-manganese batteries
Recycle time	depends on automatic features used; approx. 5 to 30 sec using no features
Shooting distance	no reatures
range Ready light Flash-readiness check Manual operation TTL film speed	0.6 to 18 m (ISO 100) provided also visible in viewfinder possible
range Settings	see exposure calculation table OFF/M/AUTO
Jetungs	Auto: TTL automatic flash on all Nikon cameras with TTL flash sensor; matrix-controlled fill-flash on all Nikon AF came- ras with matrix metering and AF Nikkor lens (on F4 cameras also with AI lenses); 3D matrix fill-flash on Nikon F90/F70 models using AF-D lenses A: automatic flash adjustment using built-in sensor; usable aperture range: f/2.8 to f/8 (ISO 100) M: manual flash, light output is adjustable from full output to 1/16; automatically switches off approx. 80 sec after came- ra/flash is last operated, in standby mode
Monitor pre-flash	used with Nikon F90/F70 ca- meras, the flash unit initiates multiple test flashes to detect the scene's special features
Red-eye reduction	used with Nikon F90/F70 ca- meras, the flash unit initiates a pre-flash to prevent red-eye



Flash exposure compensation	exposure compensation is possible in steps of one third from +1 to $-3$ LW, provided the camera type offers this feature; see exposure calculation table
Savety lock	fixes the SB-27 to the Nikon camera's accessory shoe
LCD panel	information and symbols; red-eye reduction, zoom head position, flash setting, underex- posure, working aperture, indi- rect flash, exposure compensa- tion, measurement system (m or ft), light output/compen- sation and film speed
Terminals	for external power source and sync cord
Power source	four 1.5 V LR6/AM3 or NiCd batteries; separate SD-7/SD-8 battery unit
Dimensions	$70 \times 107 \times 97 \text{ mm}$ (H × W × D)
Weight	340 g (without batteries)

Supplied with: Bag SS-27

Accessories: Battery unit SD-8

### Speedlight SB-50DX

Ouden number	FC 4 0 2 2 0 1
Order number	FSA03201
Electronic	Automatic Insulated Gate
construction	Bipolar Transistor (IGBT) and
	series circuitry
TTL auto flash mode	TTL auto flash mode with Nikon
	D1 series, F5, F100, F80, F65
Computer auto flash	Manual control: full output
Guide number	12–26 (with ISO 100/21°)
Angle of coverage	24 mm; 14 mm with wide-
	angle diffuser card
Flash recycling time	Approx. 3.5 sec.
Number of flashes	Approx. 260
AF assist illumination	Automatically fires LED beam
Al assist multimation	toward subject when perform-
	ing autofocus in dim light or in the dark with Nikon AF
	cameras
Diffuser	Attach diffuser to the camera's
	built-in speedlight for double-
	flash (bounce) operation
Infrared filter	SW-91R enables use of SB
	50DX as an infrared remote
	control
Power source	Two 3VCR 123 lithium batteries
Dimensions	63 × 107 × 105 mm
	$(W \times H \times D)$
Weight	235 g (without batteries)
Treight	235 g (Without Batteries)

Supplied with: Soft case SS-50 Infrared filter SW-91R





### AF Speedlight SB-22S

Order code	FSA02301
Electronic	Automatic insulated Gate
construction	Bipolar Transistor (IGBT) and
	series circuitry
TTL auto flash mode	TTL auto flash mode with Nikon
The date hash mode	F5, F4, F100, F90X, F80 and F65
	(older cameras see combina-
	· · · · · · · · · · · · · · · · · · ·
	tion table)
	Manual control: full output
Guide number	(ISO 100/21°) 28; 20 with wide-
	angle diffuser card
Angle of coverage	35 mm; 28 mm with wide-
	angle diffuser card
Film speed range	ISO 25/15° to 1000/31°
Flash recycling time	Approx. 5 sec. (manual control:
	full output)
Number of flashes	Approx. 230 (manual control:
	full output)
AF assist illumination	Automatically fires LED beam
	toward subject when perform-
	ing autofocus in dim light or in
	the dark with Nikon AF came-
	ras
Other features	ready-light, hand release,
oulei leatures	sync/multiple flash terminals
D	, i
Power source	Four 1.5 V (LR6) alkaline or
	1.5 V (FR6) lithium batteries;
	or 1.2 V NiCD battery pack
	(KR-AA), or 1.2 V NiMH battery
	pack
Dimensions	Approx. $68 \times 105 \times 80 \text{ mm}$
	$(W \times H \times D)$
Weight	Approx. 210 g
-	(without batteries)

Supplied with: Soft case SS-22





### Electronic flash unit SB-23

Order code	FSA02301
Electronic	Automatic insulated Gate
construction	Bipolar Transistor (IGBT) and
	series circuitry
Light output control	With silicon thyristor-rectifier
	and series circuitry; automatic
	flash-light measurement (TTL)
	with all Nikon TTL cameras
Modes	Programmed TTL automatic
TTL automatic	flash possible with Nikon
	F5/F100/F90X/F80/F65
Guide number	20 (ISO 100)
Angel of coverage	35 mm
Film speed range	ISO 25/15° to 1000/31°
Recycling time	Approx. 2 sec
Flash-ready lamp	Provided
Number of flashes	Approx. 400 with alkaline-man-
	ganese batteries; the flash
	capacity is reduced when using
	the AF illuminator
AF illuminator	Where there is insufficient light
	for automatic focusing when
	using a Nikon AF camera, the
	AF illuminator illuminates the
	object automatically with light
	indicated on an LED
Power source	four 1.5 V alkaline batteries
Tower source	type LR6/AM3 or accu NiCd
Dimensions	$67 \times 64 \times 84 \text{ mm}$
Dimensions	$(H \times W \times D)$
Weight	140 g (without batteries)
	i io g (miniour butteries)

Supplied with: Soft case SS-23





### Electronic flash unit SB-16

Order code	SB16A/FSA016AA for Nikon F3 SB16B/FSA016AB for all Nikon cameras with an ISO flash shoe
Guide number	(ASA/ISO 100 and 1 m) 32 with zoom head set at N; 19 at W1 with wide-flash adapter SW-7; 8 for secondary flash
Angle of coverage	At N setting: 60° horizontal and 45° vertical; at W1 setting with wide-flash adapter SW-7: 78° horizontal. 60° vertical
Main flash	Rotatable and tiltable; pull-out reflector for various focal lengths: Position T for 85 mm
	Position N for 35 mm Position N for 35 mm Position W1 for 28 mm
Secondary flash	Rigid built-in; for brightening with indirect flashes
Power supply	$4 \times 1.5$ V type AM 3/E 91 round cells $4 \times 1.2$ V type 3U NC batteries
TTL flash control	SB-16A for F3 SB-16B for all Nikon TTL cameras from ASA/ISO 25 to 400; usable apertures f/2–f/22
Automatic flash	Via built-in sensor with two
control Manual flash	stopped-down apertures Possible
Motor	With 1/16 power in position
synchronization	MD; additional flash does not function in this position
<b>Dimensions</b> $(W \times H \times D)$	SB-16A: about $82 \times 166.5 \times 100 \text{ mm}$ SB-16B: about $82 \times 144 \times 100 \text{ mm}$
Weight (without batteries)	SB-16A: approx. 510 g SB-16B: approx. 470 g





### Wide-flash adapter SW-7 for electronic flash unit SB-16 (spare)

Order code FXA10146

### **Battery holder MS5**

FXA10149 Order code Use With flash unit SB-16 (spare)


#### Electronic flash unit SB-17

Electronic hash	
Order code Light output control	FSA017AA Silicon thyristor-controlled rectifier and series circuitry. Automatic TTL flash output control with Nikon F3
Guide number	(ASA/ISO 100) 25; 18 with wide-flash adapter SW-6
Angle of coverage	60° horizontal (with SW-6: 70°) and 45° vertical (with SW-6: 53°)
Wide-flash adapter Number of flashes	SW-6 supplied Varies in automatic mode; about 160 in manual mode
Recycling time	with alkaline batteries Varies in automatic mode: about 8 sec in manual mode
Flash-ready lamp Flash-ready lamp	Present
contact Manual release	Provided Provided; also serves as flash- ready light
TTL automatic modes	TTL metering with Nikon F3. Film speeds form 25 to 400 ASA; usable aperture range from f/2 to f/22 <b>M</b> : On Manual, the SB-17 gives its highest flash output quite independently of the distance between flash unit and subject <b>MD</b> : On MD, the SB-17 can be synchronized with motor- driven cameras (3.5 fps). Up to 4 flash exposures can be made in rapid succession. The guide number is reduced from 25 to 7 as a result <b>A</b> : Automatic exposure control via the built-in light sensor. Film speeds from 25 to 800 ASA, two apertures: f/4 at 0.6–6.2 m (with ASA/ISO 100) and f/8 at 0.6–3.1 m. For Nikon F3 directly in the F3 accessory shoe
Power source	Four AM 3/E 91 1.5 V alkaline batteries
Accessory shoe	AS-6 for all Nikon cameras with an ISO flash shoe (without TTL)
Case Dimensions Weight	Supplied $101 \times 90 \times 42.5 \text{ mm}$ 300  g (without batteries)





Supplied with: Bag SS-17

Accessory: Wide-flash adapter SW-6 (spare)

#### Battery holder MS-6

Order code Use

FXA10147 With flash unit SB-15/17 (spare)



### TTL Macro Speedlight SB-29

Order code Speedlight type	FSA90501 Macro electronic speedlight with two flash modules that can be selected individually
Electronic	Automatic silicon-controlled
construction	rectifier and series circuitry
TTL auto flash mode	TTL auto flash with Nikon F5,
	F100, F90X, F80, F65, F3, HP,
	T, P; older cameras see combi-
	nation table
Flash mode	TTL: manual or manual with
nash moue	<sup>1</sup> /4 output
Guide number	
Guide number	(ISO 100/21° and 1 m):
	guide no. 11 with full out-put
	and both flash modules
	guide no. 12 with full out-put
	and one flash module
	guide no. 6 with 1/4 out-put in
	M and both flash modules
	guide no. 5.5 with <sup>1</sup> /4 out-put in
	M and one flash module
Film speed range	ISO 25/15° to 1000/31°
Angle of coverage	Horizontal approx. 94°/20 mm
	at distance of 1 m; vertical
	approx. 84°/24 mm at distance
	of 1 m
Frequency of	
individual flashes	Approx. 40 Hz
Flash recycling time	Approx. 3 sec. (manual control:
i nabil i celjennig time	
	tull output)
Number of flashes	full output) Approx 300 (manual control:
Number of flashes	Approx. 300 (manual control:
Number of flashes	Approx. 300 (manual control: full output), with LR6 alkaline
Number of flashes	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes
Number of flashes	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat-
	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time
Ready-light	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire
Ready-light Hand release	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided
Ready-light	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal
Ready-light Hand release Sync contacts	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal provided
Ready-light Hand release	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal provided Four 1.5 V (LR6) alkaline or
Ready-light Hand release Sync contacts	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal provided Four 1.5 V (LR6) alkaline or 1.5 V (FR6) lithium batteries;
Ready-light Hand release Sync contacts	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal provided Four 1.5 V (LR6) alkaline or 1.5 V (FR6) lithium batteries; or 1.2 V NiCD battery pack
Ready-light Hand release Sync contacts	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal provided Four 1.5 V (LR6) alkaline or 1.5 V (FR6) lithium batteries;
Ready-light Hand release Sync contacts	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal provided Four 1.5 V (LR6) alkaline or 1.5 V (FR6) lithium batteries; or 1.2 V NiCD battery pack
Ready-light Hand release Sync contacts	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal provided Four 1.5 V (LR6) alkaline or 1.5 V (FR6) lithium batteries; or 1.2 V NiCD battery pack (KR-AA), or 1.2 V NiMH battery
Ready-light Hand release Sync contacts Power source	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal provided Four 1.5 V (LR6) alkaline or 1.5 V (FR6) lithium batteries; or 1.2 V NiCD battery pack (KR-AA), or 1.2 V NiMH battery pack Flash unit:
Ready-light Hand release Sync contacts Power source	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal provided Four 1.5 V (LR6) alkaline or 1.5 V (FR6) lithium batteries; or 1.2 V NiCD battery pack (KR-AA), or 1.2 V NiMH battery pack
Ready-light Hand release Sync contacts Power source	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal provided Four 1.5 V (LR6) alkaline or 1.5 V (FR6) lithium batteries; or 1.2 V NiCD battery pack (KR-AA), or 1.2 V NiMH battery pack Flash unit: approx. 119 × 133 × 28.5 mm
Ready-light Hand release Sync contacts Power source	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal provided Four 1.5 V (LR6) alkaline or 1.5 V (FR6) lithium batteries; or 1.2 V NiCD battery pack (KR-AA), or 1.2 V NiMH battery pack Flash unit: approx. 119 × 133 × 28.5 mm (W × H × D) Control unit:
Ready-light Hand release Sync contacts Power source	Approx. 300 (manual control: full output), with LR6 alkaline batteries; approx. 350 flashes with 1.5 V AA-type lithium bat- teries with 4 sec. recycling time Lights up: flash is ready to fire Provided Sync/multiple flash terminal provided Four 1.5 V (LR6) alkaline or 1.5 V (FR6) lithium batteries; or 1.2 V NICD battery pack (KR-AA), or 1.2 V NIMH battery pack Flash unit: approx. 119 × 133 × 28.5 mm (W × H × D)

Supplied with: Three adapter rings (Ø 52, 62, 72 mm)

#### Flash unit coupler AS-4

With central contact and recycling contact

Order code Use FSW50701 Nikon F3 with all flash units with an ISO flash shoe

#### Flash unit coupler AS-6

With central contact and recycling contact

Order code Use FSW51201 all Nikon cameras with an ISO flash shoe – flash units SB-17/SB-16A

#### Flash unit coupler AS-7

With central contact and recycling contact and TTL metering with SB-16A/SB-17

Order code Use Special characteristic FSW51701 With Nikon F3 Film rewinding possible with mounted flash unit

#### Flash unit coupler AS-8

Order code Use Metering system FSW51901 With flash unit SB-16 on F3 TTL

#### Flash unit coupler AS-9

Order code FSWS2 Use With fly Nikon of flash sh Metering system TTL with

FSWS2001 With flash unit SB-16 on all Nikon cameras with an ISO flash shoe TTL with all Nikon TTL cameras

#### Flash unit coupler AS-17

for F3 with ISO flash shoe and TTL metering

Order code Use	FSW53301 AS-17 is especially for Nikon F3 cameras with TTL flash auto mode and enables the mount- ing of Nikon flash unit onto F3 cameras
Dimensions	57 × 46 × 55 mm
Weight	70 g













#### TTL cord SC-12 for Nikon F3

tor Nikon F3

Order code Use Length FSG01201 with flashes SB-11/SB-14/140 1.1 m

TTL cord SC-23 for all Nikon cameras with ISO accessory shoe

Order code Use Length FSG02101 with flashes SB-11/SB-14/140 1.1 m

Connecting cord SC-13 for sensor SU-3

Order code Use Length FSG01301 with flashes SB-11/SB-14/140 1.1 m

#### TTL cord SC-14

for Nikon F3

Order code Use Length FSG01501 with flashes SB-16A/SB-17 1.0 m

TTL cord SC-17 for all Nikon cameras with ISO accessory shoe

Order code Use

Length

FSG01801 with all flashes with ISO accessory shoe 1.5 m

#### TTL cord SC-24 for Nikon F5/F4

Order code FSG02201 Use with waist-level finder DW-20 and high-magnification finder DW-21 and all flashes with ISO accessory shoe Length 1.5 m

#### TTL multiflash connecting cord SC-18

Order code Function Use FSG01901 TTL multiflash operation with all Nikon flashes with TTL multiflash bush (see tabular summery) 1.5 m

Length

#### TTL multiflash connecting cord SC-19

Order code Function Use FSG020011 TTL multiflash operation with all Nikon flashes with TTL multiflash bush (see tabular summery) 3.0 m

Length



#### TTL multiflash adapter AS-10

Order code Function

Use

FSW52101 connection possibilities for additional flashes with ISO accessory shoe in TTL mode; with tripod screw-thread with TTL multiflash connecting cord SC-18/SC-19

#### Flash adapter AS-15

Order code Function

Use

FSW52901 external flash synchro connection with all Nikon cameras with ISO accessory shoe

#### Tripod adapter AS-11

for second flash SB-16/SB-17

Order code Function FSW52201 The tripod adapter prevents unnecessary flashing of the ready light and makes it possible to check whether the flash unit is charged and indicates when full power is reached; TTL multiflash mode with TTL multiflash connecting cord SC-18/SC-19

#### TTL sensor unit SU-4

for remote release of Nikon flash units

 
 Order code
 FSW53101

 Use
 SU-4 is a wireless accessory part, enabling the use of multiple light sources through two or more flash units in TTL mode

 Dimensions
 63 × 53 × 28 mm

 Weight
 52 q

#### Supplied with:

Diffusor SG-2 Case SS-SU4

#### Sync cord SC-11

Order code FSG01401 Use flash/camera, if a flash synchro connection exists (see tabular summary) Length 34 cm

#### Sync cord SC-15

Order code FSG01601 Use flash/camera, if a flash synchro connection exists (see tabular summary) Length 1.0 m Execution spiralcord













#### High Performance Battery pack SD-8 A

Order code Function	FSW02302 external power source for a higher flash capacity
Use	with all Nikon flashes with corresponding attachment (see tabular summery)
Connection	with cord SC-16
Charging time	3 sec with alkaline-manganese
for full power	batteries; 2 sec with NICd accus
Flash output	250 flashes with full power with alkaline-manganese bat- teries; 100 flashes with full power with NiCd-accus
Power source	six 1.5 V alkaline-manganese batteries type LR6/AM32 or six 1.2 V NiCd accus
Dimensions	$69 \times 158 \times 25 \text{ mm}$ (B × H × T)
Weight	140 g (without batteries)



Bracket SK-4

for SB-11 (replacement)

Order code

FXA10121

Bracket SK-5 for SB-14 (replacement)

Order code FXA10136

Bracket SK-7 for TTL sensor unit SU-4

Order code Use FSW53201 Metal plate with fixing screw, enabling the positioning of camera and SU-4 side to side

#### Hot shoe cover

to Pronea 600i

Order code

FXA10281

Hot shoe cover BS1

to F65

Order code

FXA10312

#### Fixing screw FM-6

Order code Use FXA10236 fixation of SD-8 at the tripod screw-thread



#### Power bracket SK-6

for Nikon flash units SB-28/26/25/24

Order code	FSW53002
Function	for side mounting of flash unit hand-held UL flash through in-
	stant disengagement feature; also functions as additional
	power source; handling ease
Flash output	through rotating handgrip with SK-6 used as external
. asir carpar	power source (with alkaline
	batteries): max. number of
	flashes and min. recycle time at
	full power approx. 200 flashes
	(ISO 100) at approx. 3.5 sec
	recycle time; with external
	battery pack SD-8A (ISO 100);
	approx. 350 flashes at approx.
	3 sec recycle time
Power source	four 1.5 V alkaline-manganese
	or NiCd batteries (type
	LR6/AM3)
Dimensions	273 × 111 × 78 mm
Weight	460 g (without batteries)

Accessories: External battery packs SD-8A

Battery pack LD-2 for Medical-Nikkor 120 mm f/4 and Nikon TTL macro flash unit SB-21

Order code Function	FSW02001 external power supply with connecting cord SC-21 and SC-21A
Flash output	with alkaline batteries and full flash output: Medical-Nikkor 120 mm: approx. 450 flashes at approx. 4 sec recycle time (ISO 100); TTL macro flash SB-21: approx. 300 flashes at approx. 4 sec recycle time (ISO 100)
Power source	eight 1.5 V alkaline-mangane- se batteries type LR6
Dimensions Weight	149 × 78 × 49 mm 325 g (without batteries)





#### Connecting cord SC-21

Order code Length Function

JXA10046 1.5 m connects battery pack LD-2 or domestic power supply adapter LA-2 to Medical Nikkor 120 mm f/4 or Nikon TTL macro flash unit SB-21

#### Connecting cord SC-21 A

Order code Length Function

JXA10065 3.0 m as for connnecting cord SC-21



	Motors/Motor accessories Motori ed accessori		Close-up accessories Accessori per macrofotografia
Nikon Nikon	Viewfinders for F5 Mirini per F5		Data backs Dorsi datari
Nikon	Viewfinders for F3 Mirini per F3	Nikon	Ever-ready cases/ compartment cases Borse-pronto/ Borse universali
	Viewfinder accessories Accessori per mirini oculari	Nikon	Neck strap Tracolla
	Release accessories Accessori per scatto flessibile		Various Accessori vari
	Focusing screens Vetrini di messa a fuoco		Oldies and accessories Vecchi modelli ed accessori

## Motor MD-4

for Nikon F3

Order code	
Shooting mode	

Triggering

FRA00801 Single frame (S), continuous (C) and locked mode (L) by means of handle on motor drive By electromagnetic trigger button which, when depressed half way, also switches on the exposure meter of the camera. The exposure meter remains on for 16 seconds after the trigger is released

#### Maximum shooting speeds

Battery type	Number of pictures/sec	
	Standard	With fixed mirror
8 × 1.5 V LR6	3.8	4
Battery MN-2	5.5	6
MA-4 power pack	5	5.5

	With exposure times longer
	than 1/125 sec, shooting
	speeds are lower
Frame counter	Subtractive type; indicates
	number of remaining frames
Automatic	Motor switches off automatically
transport stop	at end of film roll and indicates
	this by an LED
Automatic rewind	4.5 sec with NiCd battery unit
	MN-2 and 8 sec with alkaline
	batteries for 36-frame film. Au-
	tomatic rewind stop in conjunc-
	tion with MF-6B camera back
Special	Recommended for extremely
characteristic	low temperatures since the
	motor supplies the camera
	with power
Dimensions	About 146.5 × 115 × 71 mm
	$(H \times W \times D)$
Weight	About 480 g

#### Battery holder MS-3

Order code	FXA10105
Use	With motor MD-4

#### Charger MH-2

for battery unit MN-2

Order code	FRW020AC
Dimensions	$78 \times 57 \times 127 \text{ mm} (H \times W \times D)$
Weight	560 g

## Battery unit MN-2

for motor MD-4

 Order code
 FRW01801

 Charging time
 3 ½ hours continuously

 Dimensions
 43 × 37 × 114 mm (H × W × D)

 Weight
 250 g

#### Camera back MF-6B

 Order code
 FRW51602

 Use
 With Nikon F3 and motor MD-4

 Special characteristic
 Automatic switch off of rewind

Accessories: Power pack MA-4 Remote cord MC-4A/10/12







### Motor MD-12

for Nikon FM-2/FM-2 Ti/MF3A

Order code Shooting speeds Shooting modes Shutter speeds	FRA00602 up to about 3.5 fps (at shutter speeds faster than 1/125 sec) single frame (S) continuous (C) with S setting: FM-2:1–1/4000 sec FE-2: 8–1/4000 sec FE-2: 8–1/4000 sec FE-2: 8–1/4000 sec FE-2: 8–1/4000 sec auto, M 250
Pilot light	LED lights during operation
Power switch	On/Off switch
Exposure meter	the release button also serves as its On/Off switch; it switches off automatically after 50 sec
Remote control	possible; integral Nikon 3-pole jack
Power source	eight 1,5 V (AM-3E91) round cells in integral battery holder
Weight Dimensions	410 g (without batteries) without handle: $144 \times 36 \times 42 \text{ mm}$ with handle: $144 \times 68.5 \times 109.5 \text{ mm}$



#### Accessories:

Battery holder GA-33 (spare) Remote cord MC-4A10/12A

## Battery pack DB-6 for Nikon F4E (F4 + MB-23) and F90

Order code Function	FAW03601 shoot many pictures with this battery pack without changing batteries; especially suited for shots through AF-I telephoto lens
Power source	6 single-cell D-type batteries (LR-14/AM-2)
Battery check	camera function
Overload switch	in case of overheating or tech- nical problems, warning light comes on and circuit switches off automatically
Dimensions	$151 \times 187 \times 53 \text{ mm}$ (W × H × D)
Weight	550 g (without batteries)

#### Accessories:

Leather case, strap (supplied) Connection cord MC-28 (for F4E) Connection cord MC-29 (for F90)

#### Connecting cord MC-28

Order code Use

FRG20901 connection of battery pack DB-6 with Nikon F4E

#### **Connecting cord MC-29**

Order code Use

FRG21001 connection of battery pack DB-6 with Nikon F90





### Rechargeable NiMH battery pack MN-30

for Nikon F5

Order code Intended purpose	FAW03901 Takes rechargeable NiMH batte- ries for the Nikon F5, which hold their charge longer than alkaline batteries and are more effective at low temperatures; also 8 frames/sec are possible instead of 7,4 frames/sec and film rewind is guicker
Capacity	approx. 100 rolls of 36 exp. film at 20°C/68°F
Dimensions	115.5 × 30.5 × 59 mm (H × W × D)
Weight	270 g

#### Quick Charger MH-30

for NiMH battery pack MN-30

Order code Charge time	FAW04201 approx. 100 minutes; charge control lamp; when two battery packs are connected one is charged/discharged after another
Rated input	100–240 V, 50/60 Hz, 0.39 A
Rated output	14.5 V DC
	0.8 A
Dimensions	85 × 51 × 160 mm
	$(H \times W \times D)$
Weight	380 g (without mains cable)

#### Connecting cord MC-32

Order code FRG21201 Function This cord with two banana plugs is used for the connection of external 12 V power sources to the Nikon F5

#### Battery holder MS-30

for Nikon F5 (replacement)

Order code	FXA10276
Purpose	for 8 alkaline manganese
	batteries type LR6/AM3

#### Multi-power grip MB-10

Order code Function	FAW03701 The ergonomic design means more comfortable holding and provides an alternative shutter release button for shooting vertical-format pictures
Use	with Nikon F90X and F90 (the vertical release button works only with Nikon F90X)
Power source	four 1,5 V batteries type LR6/AM3 or with accessory battery holder MS-11 two 3 V lithium CR123A batteries
Dimensions	$154 \times 100 \times 60 \text{ mm}$ (W × H × D)
Weight	215 g (without batteries)



## Battery pack MB-11 for Nikon Pronea S

Order number Use

Power source

Dimensions

Weight

Increases the number of shots per set of batteries, for more consistent performance even at low temperatures Four 1.5 V alkaline-manganese (LR6/AM3) batteries Approx.  $116 \times 46 \times 53$  mm 66 g (without batteries)

FAW05101

# Multi-power high speed battery pack MB-15 for Nikon F100

Order number Use	FAW04501 Ergonomic handling, as well as more comfortable handling for shooting of vertical-format pic- tures due to alternative shutter release button
Power source	Four 1.5 V alkaline-manganese (LR6/AM3) batteries
Dimensions Weight	Approx. 156.5 $\times$ 97.5 $\times$ 69 mm 210 g (without batteries)

## Quick charger MH-15 for NiMH Battery Pack MN-15

Order number Charging	FAW04901 Charging is completed after approx. 70 minutes, indicated by charging light; two battery packs can be connected simul- taneously; charging or dischar- ging is done successively
Rated input/frequency	5 5 ,
Charging voltage	8.0 V/1.6 A (mains operation) 8.7 V/1.2 A (charging operation)
Dimensions Weight	$85 \times 51 \times 160 \text{ mm}$ 380 g (without mains cable)

#### NiMH battery pack MN-15

for Nikon F100

Order number Use	FAW04601 Allows the use of rechargeable NiMH battery packs with F100; these have a longer life than alkaline batteries and feature better low-temperature beha- viour; further they enable 5 fps instead of 4.5 fps and faster rewind
Battery life	Approx. 100 films of 36 expo- sures at 20°
Dimensions Weight	Approx. 118 × 29 × 58 mm 180 g

#### **Battery holder MS-12** for Nikon F100 (spare part)

Order number	FXA10294
Use	Four 1.5V alkaline-manganese
	(LR6/AM3) batteries









## Battery holder MS-13 for Nikon F100

Order code Use

FAW04401 Two 3 V lithium batteries type CR123









## Battery holder MS-15 for MB-15/F100

Order code Use

FXA10295 Four 1.5 V alkaline-manganese batteries (LR6/AM3)

## Multi-power high-speed battery pack MB-16 for Nikon F80

Order code Use	FAW05301 Increases the number of shots per set of batteries, for more consistent performance even at low temperatures
Power source	Four 1.5 V alkaline-manganese batteries (LR6/AM3)
Dimensions	Approx. 141 $\times$ 37 $\times$ 71 mm (W $\times$ H $\times$ D)

#### **Battery holder MS-16** for MB-16

Order code

FXA10307

## Multi-power high-speed battery pack MB-17 for Nikon F65

Order code Use	FAW05401 Increases the number of shots per set of batteries, for more consistent performance even at low temperatures
Power source	Four 1.5 V alkaline-manganese batteries (LR6/AM3)
Dimensions	Approx. 139 $\times$ 43 $\times$ 65 mm
DIIICISIOIIS	$(W \times H \times D)$

#### Anti-cold battery holder DB-2

for Nikon F3/FM-2/FM-2Ti

Order code Use

Power source

FAW01801 To ensure camera functions in extremely low temperatures Two alkaline-manganese batteries type AA (AM 3/E91)

#### Battery holder MS-8

for Nikon F90 X (replacement)

Order code

FXA10257

#### Battery holder MS-10

for MB-10/F90 X

Order code FXA10268 Use Four 1.5 V alkaline-manganese batteries LR6/AM3

#### Battery holder MS-11 for MB10/F90 X

Order code Use FAW03801 Two 3 V lithium batteries CR2023

#### Shooting speed selection MK-1

for Motor MD-4 (F3)

Order code Shooting speeds

Dimensions

Weight

FRW52301 C1: 1 shot/sec. C2: 2 shots/sec. C3: 3 shots/sec. C/S: the MD-4 motor determines the shooting speed 146.5 × 33.5 × 75 mm 150 g

#### Connecting cord MC-11

(replacement) Order code

Use Length FRG01301 for connection power pack MA-4 and motor MD-4 / MB-22 3 m

#### Tripod adapter AH-3

Order code Use FRW51502 for attaching Nikon MD-4/12 motors to a tripod or to reprocopy outfit PF-4; therefore the connection of the tripod is in the middle of the camera













#### Multi-meter finder DP-30

(replacement)

Order code For use with Special characteristics

**Exposure metering** 

Dimensions

Weight

FAB024AA Nikon F5 cameras It offers an eyepoint of 22 mm and virtually 100% frame cover age; Diopter adjustment from -3 to +1 and an eyepiece shutter are built in Matrix centre-weighted integral and spot metering 45 × 59 × 72 mm  $(H \times W \times D)$ 205 q



#### Action finder DA-30

Order code For use with Special characteristics

Dimensions

Weight

Nikon F5 cameras It offers an eyepoint of 9 cm and 100 % frame coverage Exposure metering Centre-weighted integral and spot metering 61 × 59 × 89 mm  $(H \times W \times D)$ 365 q

FAB02501



### $6 \times$ High-magnification finder DW-31

Order code Use with Special characteristics

Exposure metering Dimensions

Weight

FAB02701 Nikon F5 cameras Suitable for micro- and macrophotography and for reproductions; a rubber eyecup. Diopter adjustment from -5 to +3 and an eyepiece cover are included; connection available for TTL cord SC-24 Spot metering 70 × 61 × 73 mm (H × W × D) 160 g





Order code Use with Special characteristics

Exposure metering

Dimensions

Weight

The finder has a flip-up magnifier providing 5  $\times$  magnification for accurate focusing; it has a connection for TTL cord Spot metering 74  $\times$  61  $\times$  73 mm 95 g

FAB02601

Nikon F5 cameras



### Cover for finder FE-15

Order code Use FAW01601 For prism DE-2/DE-3 and for DW-4/DW-3



#### Eyelevel finder DE-2

(remplacement)

Order code Use with Dimensions

Weight

FAB001AA Nikon F3 cameras  $39 \times 59 \times 66$  mm (H  $\times$  W  $\times$  D) 120 g



#### High-eyepoint finder DE-3

Order code Use with Special characteristics

Dimensions

Weight

FAB011AA Nikon F3 cameras The entire frame is visible to the eye up to 2.5 cm away from the eyepiece  $52.5 \times 43.5 \times 69$  mm (H × W × D) 165 g



#### Action finder DA-2

Order code For use with Special characteristics Dimensions Weight FAB014AA Nikon F3 cameras The entire frame is visible to the eye up to 8 cm away from the eyepiece  $59.5 \times 52.9 \times 73.2$  mm (H  $\times$  W  $\times$  D) 300 g



#### 6× High-magnification finder DW-4

Order code Use with Special characteristics

Dimensions

Weight

FAB013AA Nikon F3 cameras This finder is suitable for obtaining very fine focusing, for example in micro or macro photography and for reproduction. Fitted with a rubber eyecup, a –5 to +3 diopter adjustment and an eyepiece shutter  $54.2 \times 26.5 \times 59.6$  mm (H × W × D) 220 g





Order code Use with Special characteristics

Dimensions

Weight

FAB012AB Nikon F3 cameras Built-in flip-up magnifier provides  $5 \times$  magnification for accurate focusing  $73 \times 54.2 \times 59$  mm (H × W × D) 90 g

#### Cover for finder FE-17

Order code Use 60000070 For action finder DA-2

#### Eyepiece magnifier DG-2

Order code Magnification

Diopter setting

Eyecup

FAF20202 2× the central portion of the finder image from -5 to +1 diopter built-in

The magnifier is provided with hinges so that it can be flipped upwards to expose the entire finder image to allow accurate composition of the picture.

## Right-angle viewing attachment DR-4

Order code Coverage Ratio Diopter setting Eyecup Weight FAF20401 100% of the camera viewfinder 1:1 from –5 to + 3 dpt. Built-in 100 q







#### Eye cup

for Nikon F5/F4/F3HP/F3Ti Order code DK2/FAF50801

for Nikon F3 Order code DK4/FAF50302

for Nikon FM-3A/FM-2 Order code DK3/FAF50402

for Nikon F100/F90X Order code DK6/FAF50901

for Nikon F60 Order code DK10/FXA10296

for Nikon F70/Pronea 600i Order code DK9/FAF51101

for Nikon F601 Order code FE12/FAF50601

Adapter DK-12

for DR-4 to Nikon F5

Order code FXA10297

#### Adapter DK-13

for DR-4 to Nikon F3

Order code FPW01401

Antifog eyepiece DK-14A

for Nikon F5 Order code

FAF51201

#### Antifog eyepiece DK-15A

for Nikon F100

Order code FAF51301

#### Eyepiece adapter FE-10

Order code FAF50501 Use for attaching a right-angle viewing DR 3 or an eyepiece magnifier DG 2 to the Nikon F-601/F70/F50

#### Eyepiece adapter DK-7

Order code FAF51001 Use for attaching a right-angle viewing DR 3 or an eyepiece magnifier DG 2 to the Nikon F3HP (DE-3)/F4/F4S/F4E (DP-20)

#### Eyepiece cover DK-5

for Nikon F-601/F70/F50

Order code FXA10193

Eyepiece cover DK-8 for Nikon F100/F90X/F801S



FXA10216









#### Correction lenses for Nikon F100/F90X/F90

Order code	Correction
KA810/FAF05901	–5 dpt
KA811/FAF05801	–4 dpt
KA813/FAF05701	–3 dpt
KA812/FAF05601	–2 dpt
KA814/FAF05101	0 dpt
KA818/FAF05201	+0,5 dpt
KA815/FAF05301	+1 dpt
KA816/FAF05401	+2 dpt
KA817/FAF05501	+3 dpt
KA819/FXA10215	neutral glass
DK15A/FA51301	antifog eyepiece to F100

#### for Nikon F80/F70/F60/F50/ F601/PRONEA 600i

Order code KA510/FAF04901 KA511/FAF04801 KA512/FAF04701 KA513/FAF04601 KA514/FAF04101 KA518/FAF04201 KA516/FAF04401 KA517/FAF044501 Correction -5 dpt -4 dpt -3 dpt -2 dpt 0 dpt +0,5 dpt +1 dpt +2 dpt +3 dpt to F3

### for Nikon F3

Order code KA10/FAF00901 KA11/FAF00801 KA12/FAF00701 KA13/FAF00601 KA14/FAF00101 KA14/FAF00101 KA15/FAF00301 KA16/FAF00401 KA17/FAF00501 KA19/FXA10091

-5 dpt -4 dpt -3 dpt -2 dpt 0 dpt +0,5 dpt +1 dpt +2 dpt +3 dpt neutral glass

Correction

### for Nikon F3HP/F5/F4/F4S/F4E

Order code	Correction
KA20/FAF01701	–3 dpt
KA213/FAF01601	–2 dpt
KA214/FAF01101	–0 dpt
KA215/FAF01301	+1 dpt
KA216/FAF01401	+2 dpt
KA219/FXA10138	neutral glass to F3HP
KA419/FXA10225	neutral glass to F4/F4S/F4E
KA420/FXA10280	neutral to F5
DK14A/FAF51201	antifog eyepiece to F5

### for Nikon FM2/FM2T/FM3A

Order code KA110/FAF02901 KA111/FAF02801 KA112/FAF02701 KA113/FAF02601 KA113/FAF02201 KA118/FAF02201 KA115/FAF02201 KA115/FAF02301 KA116/FAF02401 KA117/FAF02501 KA119/FXA10066 Correction -5 dpt -4 dpt -3 dpt -2 dpt 0 dpt +0,5 dpt +1 dpt +2 dpt +3 dpt neutral glass









#### Infrared Remote control ML-2

Order code Function Use	FRW53101 wireless remote control set for cameras or speedlights by infrared light with all Nikon cameras which have an electric remote control synchro contact
Range	approx. 100 m
Number channels	CH-1, 2, 3 or all simultaneously
Number of	approx. 4500 with alcaline
transmissions	batteries
Shutter function	(S) for single frame settings (C) for continuous delay (3 sec) function check
Power source	4 alkaline-manganese or rechargeable NiCd Batteries type LR6/AM-3; each for trans- mitter and receiver
Fixation	transmitter: tripod mount 1/4" receiver: ISO accessory shoe, rotating 360°
Dimensions	transmitter: $163 \times 22 \times 69 \text{ mm}$ receiver:
Weight	64 × 93 × 75 mm transmitter: 130 g receiver: 120 g (without batteries)

Transmitter ML-2T and receiver ML-2R are also separately available

## Supplied with: Mounting bracket

Accessories: Remote cord MC-12A Intervalometer MT-2

#### Transmitter ML-2T

Order code

#### Receiver ML-2R

Order code

FXA10231

FXA10230



#### Infrared Remote control ML-3

Infrared Remote	control ML-3	
Order code Function	FRW20101 infrared remote shutter release; automatic photocell shutter	
Use	release for all Nikon F90 models; with connecting cord MC-25 for all Nikon cameras with electric remote control synchro connec- tion	
Range	approx. 9 m	
Number of channels Shutter function setting	three: CH1, CH2 and A. TRIG single frame (S) continuous (C) function check delay (3 sec)	
Transmitter:		
Standby	approx. 72 hours in A. TRIG setting (photocell) using alkaline batteries	
Output channels	three: CH1, CH2 and A. TRIG	
Tripod socket Power source	1/4" two alcaline batteries type AM4/I R03	
Dimensions	$117 \times 22 \times 30 \text{ mm}$	
Weight	$(W \times H \times D)$ 40 g (without batteries)	
Receiver: Number of		
channels	two: CH1 and CH2	
Connection cord Unit base	approx. 28 cm rotates 360°	
Compatibility	receiver reacts to CH1, CH2, ALL, TEST and DELAY signals from ML-2	
Power source	F90 battery; connection socket for 6 V power source	
Dimensions	$50 \times 36 \times 47 \text{ mm}$	

#### Transmitter ML-3T

Order code

Weight

FXA10253

 $(W \times H \times D)$ 

51 g (without batteries)

#### **Receiver ML-3R**

Order code

FFW10254

#### Infrared Remote control ML-L1

for Nikon Nuvis und Lite Touche

Order code

FWW00101

#### Infrared Remote control ML-L3

for Nikon F65

Order code

FFW002AA

#### Connecting cord MC-16A

Order code Length Use FRG01701 1 m for connecting intervalometer MT-2 to motor MD4/12 and for cameras F4s/F4E/F-801S

#### Remote shutter cord MC-20

for Nikon F5/F90X; with other cameras/motors in combination with the MC-26 adapter cord

Order code Length Function	FRG20101 80 cm remote adjustment and release of timed exposures up to 9 hours, 59 min, 59 s; esposure time is counted cumulatively or deducted from total
LCD panel	five-figure, seven-segment display; may be illuminated
Plug and socket	10 pole
Power source	one 3 V lithium battery, type CR 2032; no battery required with Nikon F90X, camera supplies power

#### Remote shutter cord MC-30

for F5/F90X

Order code	
Attachment	
Length	

FRG21101 10 pole 80 cm

The remote shutter cord MC-30 has the same function as the release button of the camera

### Extension cord MC-21

for remote control accessories

 Order code
 FRG20301

 Length
 3 m

 Plug and socket
 10 pole (both ends)

#### Remote cord MC-22

for individual release setups

Order code Length Plug and socket FRG20401 1.15 m 10 pole; banana plugs at one end; may be extended as desired



#### Connecting cord MC-23

simultaneous release of two Nikon F5/F90X

Order code Length Plug and socket FRG20501 45 cm 10 pole (both ends)

#### Adapter cord MC-25

for connecting standard remote control accessories to the Nikon F5/F90X

Order code Length Plug and socket FRG20701 25 cm 10 pole/2 pole

#### Adapter cord MC-26

for connecting MC-20/MC30 remote shutter cord to standard Nikon Cameras and motors

Order code Length Plug and socket FRG20201 25 cm 2 poles/10 poles

#### Remote shutter cord MC-10

for Nikon motors MD-4/MD-12

Order code Length FRG01202 3 m

No display in Nikon F3 LCD; Nikon FM-2 exposure meter remains on until motor is switched off

#### Remote shutter cord MC-12B

for all cameras and motors with 2 poles remote shutter connection

Order code Length FRG01403 0.8 m

Press cable release to view display in camera's LCD; Nikon MFM-2 exposure meter remain on until motor is switched of



#### Remote shutter cable MC-4A

for individual remote appliance

Order code	FRG00702
Length	1 m
Plug and socket	2 pole/banana plug; can be extended as desired
Use	for all cameras/motors with a remote shutter release plug (2 pole)

#### Connecting cord MC-17S

simultaneous release of two cameras/motors

Order code	FRG01601
Length	40 cm
Use	for all cameras/motors, with a re-
	mote shutter release plug (2 pole)

#### Cable release AR-3

Order code	FWW00601
Length	30 cm
Use	for all cameras with a cable
	release plug; with fixing plate

#### **Release adapter AR-8**

Order code	FWW01001
Use	adapter between conical
	thread and Leica bell
Use	with Nikon FM-2

#### Soft shutter release AR-9

Order code Function	FWW01201 release without vibration due to a better recognition of the release pressure point and a
Use	bigger support for all cameras with cable release-thread

#### Terminal release MR-3

Order code	FRW51203
Function	additional terminal release with
	cable release connection
Use	for all cameras/motors with a re-
	mote shutter release plug (2 pole)

#### Double cable release AR-7

mechanical/mechanical

Order code Function	FPW21701 maintenance of the automatic diaphragm control between the camera and the bellow focusing attachment PB-6 release plug
Use	for all cameras with a cable release plug

#### Double cable release AR-10

electrical/mechanical

Order	code
Functi	on
Use	

FPW21901 same as AR-7 for all cameras with a remote shutter release plug; with adaptercord MC-25 and for Nikon F90



#### for Nikon F5/per Nikon F5

Order code Codice di comando	Description	Descrizione	Order code Codice di comando	Description	Descrizione
F5A	Focusing screen A Focusing screen with matte Fresnel field; 12 mm centre circle for reference and split-image range-finder; for general photography using lenses with high light intensity	Vetrino di messa a fuoco A Telemetro orizzontale centra- le, cerchio di 12 mm indicante la zona di maggiore sensibi- lità esposimetrica, zona ester- na ad anelli di Fresnel; per la fotografia generale con obiet- tivi luminosi	F5G Type G F5G1/FAC11701 F5G2/FAC11801 F5G3/FAC11901 F5G4/FAC12001	Focusing screen G Clear Fresnel screen with 12 mm microprism centre circle; for focusing in poor light conditions; available in four versions, depending on lens focal length	Vetrino di messa a fuoco G Aera esterna trasparente dotata di anelli di Fresnel con zona centrale di microprismi di 12 mm di diametro, facilia- ta la messa a fuoco con scar- sa luminosità. 4 modelli a secunda delle focale e dei diaframmi
F5B	Focusing screen EC-B/B Focusing screen with matte Fresnel field; 5 mm and 12 mm centre circle for reference and focusing zone; for general photography	Vetrino di messa a fuoco EC-B/B Aera smerigliata ed anelli di fresnel; cerchio di riferimento di 5 mm e 12 mm; per foto- grafia generale	F5J	Focusing screen J Focusing screen with matte Fresnel field; 5 mm (micro- prism) and 12 mm centre circle for reference; for gen- eral photography	Vetrino di messa a fuoco J Cerchi 5 mm a micro-prismi cercho 12 mm di riferimento, anelli di Fresnel; per fotografi generale
Type B F5B/FAC11101 F5ECB/FAC11001	Selected focusing zone is indicated on the focusing screen	La zone della misurazione selezionalta è indicata sul vetrino di messa a fuoco	Type J F5J/FAC12101		
<b>F5C</b>	Focusing screen C Fine clear-glass screen; 4 mm centre circle for reference and cross hairs; for high magnifications	Vetrino di messa a fuoco C Zona centrale trasparente 4 mm dotata di reticolo a croce; smerigliatura fine sulla restante aera; per forti ingran- dimenti	F5L	Focusing screen L Corresponds to type A but with diagonal split image (45°); facilitates focusing on horizontal lines	Vetrino di messa a fuoco L Simile al tipo A, ma con tele- metro 45°, facilità la messa a fuoco di un soggetto con line orizzontali
Type C F5C/FAC11501			Type L F5L/FAC11301		
F5E	Focusing screen E Focusing screen with matte Fresnel field; 5 mm und 12 mm centre circle for reference and focusing zone; vertical and horizontal lines; for architec- tural photography	Vetrino di messa a fuoco E Zone centrale 5 mm e 12 mm finemente smerigliata, circon- data da anelli di Fresnel, aera munita di reticolo; per la foto- grafia d'architettura	F5M	Focusing screen M Clear glass with double cross hairs and millimetre scales; 5 mm centre circle for refer- ence; for microphotography with high magnification	Vetrino di messa a fuoco M Superficie transparente do- tata di doppio reticolo a scala millimetrica orizzontale e ver- ticale, cerchio di riferimento d 5 mm, per microfotografia a forte ingrandimento
	Focusing screen F	Vetrino di messa a fuoco F	 F5U	Focusing screen U	Vetrino di messa a fuoco U

Type F F5F/FAC12301



Focusing screen F Focusing screen with matte Fresnel field; 5 mm und 12 mm centre circle for reference and focusing zone; for reflex lenses

Vetrino di messa a fuoco F Aera smerigliata ad anelli di Fresnel; cerchi di riferimento 5 mm e 12 mm; per obiettivi reflex

#### F5U

Type U

F5U/FAC11401



Focusing screen U Focusing screen with matte Fresnel field; 5 mm und 12 mm centre circle for reference and focusing zone; for telephoto lenses from 200 mm

#### Vetrino di messa a fuoco U Aera smerigliata ad anelli di Fresnel; cerchi di riferimento 5 mm e 12 mm; per obiettivi di lunghezza focale pari o superiore a 200 mm

#### for Nikon F3/per Nikon F3

Order code Codice di comando	Description	Descrizione	Order code Codice di comando	Description	Descrizione
F3A G Type A F3A/FAC04201	Focusing screen A Focusing screen with matte Fresnel field; 12 mm centre circle for reference and split- image range-finder	Vetrino di messa a fuoco A Telemetro orizzontale centra- le, cerchio di 12 mm indicante la zona di maggiore sensibi- lità esposimetrica, zona esterna ad anelli di Fresnel. Per la fotografia generale con obiettivi luminosi	F3J () () () () () () () () () ()	Focusing screen J Focusing screen with matte Fresnel field, 4 mm micro- prisms in 12 mm centre circle for reference; for general photography	Vetrino di messa a fuoco J Cerchio 4 mm a microprismi, cerchio 12 mm di riferimento, anelli di Fresnel
F3B Type B F3B/FAC04301 F3U/FAC06201	Focusing screen B Focusing screen with matte Fresnel field; 12 mm centre circle for reference. For macro photography and telephoto lenses Focusing screen U Same focusing screen as B, but especially designed for lenses of 100 mm or longer	Vetrino di messa a fuoco B Area smerigliata ad anelli di Fresnel. Cerchio di riferimento di 12 mm. Per macrofotogra- fia e teleobiettivi Vetrino di messa a fuoco U Identico al modello B, ma particolarmente adatto agli obiettivi di lunghezza focale superiore a 100 mm	F3K Type K F3K/FAC04101	Focusing screen K Combination of types A and J; for general photography	Vetrino di messa a fuoco K Combinazione dei tipi A e J. Per la fotografia generale
F3C (+) Type C F3C/FAC04401	Focusing screen C Fine matte focusing screen; clear glass centre circle; cross hairs in 4 mm centre circle; for high magnifications	Vetrino di messa a fuoco C Zona centrale trasparente 4 mm dotata di reticolo a croce. Smerigliatura fine sulla restante aera. Per forti ingran- dimenti	F3L Type L F3L/FAC05601	Focusing screen L Corresponds to type A but with diagonal split image (45°); facilitates focusing on horizontal lines	Vetrino di messa a fuoco L Simile al tipo A, ma con tele- metro 45° Facilità la messa a fuoco di un soggetto con linee orizzontali
F3D Type D	Focusing screen D Fine matte focusing screen; particularly suitable for long telephoto lenses and for close-up photography	Vetrino di messa a fuoco D A zona unica, smerigliato fi- nemente su tutta la superficie. Per lunghi teleobiettivi e per macrofotografia con rapporti medi	F3M	Focusing screen M Clear glass with double cross hairs and millimetre scales; for microphotography with high magnification	Vetrino di messa a fuoco M Superficice trasparente dotata di doppio reticolo a scala milli- metrica orizzontale e vertica- le. Per microfotografia a forte ingrandimento
F3D/FAC04501 F5E Type E F3E/FAC04601	Focusing screen E With matte Fresnel field with 5 mm and 12 mm centre circle for reference; vertical and horizontal lines. For architectural photography in conjunction with the PC-Nikkor lens	Vetrino di messa a fuoco E Zona centrale 12 mm fine- mente smerigliata, circondata da anelli di Fresnel, area munita di reticolo. Per foto d'architettura con i PC-Nikkor e le riproduzioni	F3M/FAC05701 F3P Type P F3P/FAC05801	Focusing screen P Focusing screen with matte Fresnel field; diagonal split- image; microprisms and 12 mm centre circle for reference; vertical and horizontal lines in addition	Vetrino di messa a fuoco P Area con anelli di Fresnel dotata di telemetro a 45°, corona di microprismi, cerchio di riferimento di 12 mm, una linea centrale orizzontale e una verticale. Adatto alla foto- grafia generale
F3G	Focusing screens G1, 2, 3, 4 Clear Fresnel focusing screens with 12 mm micro- prism collar. For focusing under poor light conditions; available in 4 models	Vetrino di messa a fuoco G1, 2, 3, 4 Area esterna trasparente dotata di anelli di Fresnel con zona centrale a microprismi di 12 m di diametro. Facilità la messa a fuoco on scarsa lu- minosità do modelli a sconda	F3R	Focusing screen R Focusing screen with matte Fresnel field and split-image range finder which does not darken when slow lenses are used; with vertical and hori- zontal lines; suitable for architectual bactericabu	Vetrino di messa a fuoco R Area con anelli di Fresnel dotata di telemetro e reticolo. Il telemetro non si oscura nemmeno con obiettivi dotati di apertura massima compre- sa tra f/3,5 et f/5,6. Per la fo- torazio di architettura

minosità. 4 modelli a seconda

delle focali e dei diaframmi

Type R

F3R/FAC05901

architectural photography

tografia d'architettura

Type G F3G1/FAC04701 F3G2/FAC04801 F3G3/FAC04901 F3G4/FAC05001

#### for Nikon F100/per Nikon F100

Order code Codice di comando	Description	Descrizione	Order code Codice di comando	Description	Descrizione
F1B	Focusing screen A Matte screen with Fresnel field with 12 mm central circle for reference; with split-image range-finder; for general photography using lenses with high light intensity	Vetrino di messa a fuoco B Area smerigliata ad anelli di Fresnel. Cerchio di riferimento di 12 mm. Per macrofotogra- fia e teleobiettivi	F1E	Focusing screen G Clear Fresnel focusing screen with 12 mm microprism centre circle; for focusing in low light conditions; available in 4 versions depending on lens focal length	Vetrino di messa a fuoco E Zona centrale 12 mm fine- mente smerigliata, circondata da anelli di Fresnel, area munita di reticolo. Per foto d'architettura con i PC-Nikkor e le riproduzioni
for Nikon F90X/per	Nikon F90X				
Order code Codice di comando	Description	Descrizione	Order code Codice di comando	Description	Descrizione

FA911

Type E

FA911/FAC10501

FA910

Type B FA910/FAC10601

#### for Nikon FM3A/per Nikon FM3A

Order code Codice di comando	Description	Descrizione	
B3	Focusing screen B Matte screen with Fresnel field and 12 mm centre circle for reference and focusing zone; for general photography	Vetrino di messa a fuoco Area smerigliata ad anel Fresnel. Cerchio di riferin di 12 mm. Per macrofoto fia e teleobiettivi	

Focusing screen B

Matte screen with Fresnel

for reference and focusing

field and 12 mm centre circle

zone; for general photography

Type B FA301/FAC14101 o B elli di mento ogra-

Vetrino di messa a fuoco B

Area smerigliata ad anelli di

Fresnel. Cerchio di riferimento

di 12 mm. Per macrofotogra-

fia e teleobiettivi



Type E FA302/FAC14201 Matte screen with Fresnel field and 12 mm centre circle for reference: vertical and horizontal lines and focusing zone: for architectural photography and reproduc-

Focusing screen E

Matte screen with Fresnel

for reference: vertical and

field and 12 mm centre circle

horizontal lines and focusing

zone; for architectural photo-

graphy and reproduction

Vetrino di messa a fuoco E Zona centrale 12 mm finemente smerigliata, circondata da anelli di Fresnel, area munita di reticolo. Per foto d'architettura con i PC-Nikkor e le riproduzioni

## Order code Description Codice di comando Focusing screen E

tion

Vetrino di messa a fuoco E Zona centrale 12 mm finemente smerioliata, circondata da anelli di Fresnel, area munita di reticolo. Per foto d'architettura con i PC-Nikkor e le riproduzioni

Descrizione



Focusing Screen K Matte screen with Fresnel field and 4 mm microprism in 12 mm centre circle for reference; split-image range finder

Vetrino di messa a fuoco K telemetro centrale ad immagine spezzata con corona di microprismi: cerchio di riferimento 12 mm diametro di massima sensibilità esposimetrica: anelli Fresnel sulla restante superficie; per la fotografia generale

Type K FA300/FAC14001

#### Close-up attachment lenses

Nikon close-up attachment lenses occupy little space and are easy to carry with you. They screw directly into the front thread of the lens (52/62 mm dia.), providing a simple and convenient way of increasing magnification. The lenses have no effect on automatic exposure control and TTL metering. Nikon Integrated Coating is applied for improving image contrast and reducing flair. The twoelement achromatic lenses (3T/4T/5T/6T) provide a high image quality. The longer the focal length of the lens used, the greater the magnification which can be achieved. The close-up attachment lenses can be used with a larger number of Nikkor and AF Nikkon lenses, either singly or in combination, and are an attractive option for beginners in close-up photography.

#### Close-up attachment lens no. 0

Order code FPF001AB For thread diameter 52 mm Diopter 0.7

#### Close-up attachment lens no. 1

Order code FPF002AC For thread diameter 52 mm Diopter 1.5

#### Close-up attachment lens no. 2

Order code FPF003AC For thread diameter 52 mm Diopter 3.0

#### Close-up attachment lens no. 3T

Order code FPF004 Special characteristic Two ele For thread diameter 52 mm Diopter 1.5

FPF004AB Two element achromatic lens 52 mm 1.5

#### Close-up attachment lens no. 4T

 Order code
 FPF005AB

 Special characteristic
 Two element achromatic lens

 For thread diameter
 52 mm

 Diopter
 2.9

#### Close-up attachment lens no. 5T

 Order code
 FPF00601

 Special characteristic
 Two element achromatic lens

 For thread diameter
 62 mm

 Diopter
 1.5

#### Close-up attachment lens no. 6T

 Order code
 FPF00701

 Special characteristic
 Two element achromatic lens

 For thread diameter
 62 mm

 Diopter
 2.9



## **CLOSE-UP ACCESSORIES • ACCESSORI PER MACROFOTOGRAFIA**

#### Distance between close-up attachment lenses and subject, magnification and field of photography Distanza tra soggetto e lente addizionale, rapporto d'ingrandimento e area inquadrata

	Lens Obiettivo	Distance between close-up attachment lens and subject Distanza soggetto- obiettivo	Magnification (1/–) Rapporto di riproduzione (1/–)	Area covered Area inquadrata
Π	50 mm f/1.4S	150–38,1	1/27–1/5,5	65,7×98,5–31,1×19,6
	50 mm f/1.2S	151-41,6	1/27,4–1/6,2	65,6×98,5–14,8×22,2
	AF 50 mm f/1.8S	150–38,1	1/27–1/5,3	65,6×98,4–12,8×19,1
	50 mm f/1.8S	150–38,1	1/27,4–1/5,4	65,7×98,5–12,9×19,3
Nr.	24 mm f/2.8S	151–27,7	1/57,9–1/7,8	139×208–18,6×27,9
	28 mm f/2.8S	151–19,6	1/49–1/3,7	118×178–8,8×13,2
	35 mm f/2S	152–27,5	1/39–1/4,9	94,1×141–11,8×17,6
	AF 35–70 mm f/3.3–4.5S	42–152 (32)	1/5,1–1/39 (1/3,7–1/7)	123×85–94×141 (89×134–16,9×25,4)
Π	50 mm f/1.4S	77,1–33,4	1/13–1/5	31,3×47–10,8×16,2
	50 mm f/1.2S	77,9–35,9	1/13–1/5	31,3×46,9–12×18
	AF 50 mm f/1.8S	77,1–33,4	1/13–1/4,4	31,3×46,9–10,5×15,8
L	50 mm f/1.8S	76,9–33,3	1/13–1/4,4	31,3×47–10,6×15,9
ž	24 mm f/2.8S	77,8–25,8	1/27,6–1/6,9	66,2×99,3–16,5×24,7
	28 mm f/2.8S	77,6–19,1	1/24–1/34	56,5×84,7–8,3×12,4
	35 mm f/2S	78,3–26,1	1/19–1/4,4	44,8×67,2–10,6×16
	AF 35–70 mm f/3.3–4.5S	37–79 (30)	1/4,2–1/19 (1/3,3–1/6,1)	101×151–45×67 (78×11,7–14,7×22,1)
$\square$	50 mm f/1.4S	43,5–27,5	1/6,6–1/3,4	15,7×23,6–8,1×12,1
	50 mm f/1.2S	44,3–29,2	1/6,6–1/3,7	15,7×23,6–8,8×13,2
	AF 50 mm f/1.8S	43,4–27,5	1/6,6–1/3,3	15,7×23,6–7,9×11,8
	50 mm f/1.8S	43,2–27,3	1/6,6–1/3,3	15,7×23,6–7,9–11,9
Nr. 2	24 mm f/2.8S	44,1–23	1/13,9–1/5,6	33,3×49,9–13,4×20,2
[	28 mm f/2.8S	44–18,2	1/12–1/3,1	28,4×42,6–7,4×11,1
	35 mm f/2S	44,6–23,4	1/9,4–1/3,7	22,5×33,8–8,7×13,1
	AF 35–70 mm f/3.3–4.5S	30–45,6 (26)	1/3,1–1/9,4 (1/2,6–1/4,9)	74×11,1–22,6×34 (6,2×9,3–11,7×17,6)

	Lens Obiettivo	Distance between close-up attachment lens and subject Distanza soggetto- obiettivo	Magnification (1/–) Rapporto di riproduzione (1/–)	Area covered Area inquadrata
	85 mm f/2S	46–77	3,8–7,8	13,7×9–28×18,6
	105 mm f/2.5S	51–78	3,3–6,3	12×8–22,7×15
	Micro 105 mm f/2.8S	79,6–34,6	1/6,3–1/5,1	15,1×22,7–3,6×5,4
зт	AF Micro 105 mm f/2.8S	81,9–29,3	1/6,3–1,2	15,2×22,8–2×3
m	135 mm f/2.8S	57–80	2,7–4,9	10×6,6–17,6×11,7
	135 mm f/3.5S	57–80	2,7–4,9	10×6,5–17,6×11,7
	200 mm f/4S	68–83	2,0–3,3	7,2×4,8–12×8
	Micro 200 mm f/4S	88,5–50,3	1/3,3–1/1,15	11,8×7,9–4,1×2,7
	85 mm f/2S	35–44	2,5–4,0	9×6–14,2×9,5
	105 mm f/2.5S	38–46	2,2–3,2	7,8×5,2–11,6×7,7
	Micro 105 mm f/2.8S	47–30,7	1/3,2–1/1,2	7,7×11,5–2,9×4,3
4T	AF Micro 105 mm f/2.8S	49,5–27,8	1/3,2–1,4	7,8×11,7–1,7–2,6
4	135 mm f/2.8S	41–47	1,7–2,5	6,1×4,1–9×6
	135 mm f/3.5S	41–47	1,7–2,5	6,1×4,1–9×6
	200 mm f/4S	48–51	1,2–1,7	4,2×2,8–6,1×4,1
	Micro 200 mm f/4S	56,1-42,2	1/1,7–1,22	6×4–2,9×1,93
	85 mm f/2S	29,2–33,5	1,9–2,7	6,8×4,5–9,4×6,2
	105 mm f/2.5S	31,8–35,1	1,6–2,2	5,8×3,8–7,7×5,1
	Micro 105 mm f/2.8S	36,7–29	1/2,2–1,0	5,2×7,8–2,3×3,5
41	AF Micro 105 mm f/2.8S	38,6–27	1/2,2–1,6	5,2×7,8–1,5×2,3
3T+4T	135 mm f/2.8S	34,6–36,6	1,2–1,7	4,4×2,9–6×4
	135 mm f/3.5S	34,7–36,5	1,3–1,7	4,6×3,1–6×4
	200 mm f/4S	40-40	0,83–1,1	3×2-4×2,7
	Micro 200 mm f/4S	45,2–38	1/1,1–1,58	4×2,7–2,2×1,5
-				

	Lens Obiettivo	Distance between close-up attachment lens and subject Distanza soggetto- obiettivo	Magnification (1/–) Rapporto di riproduzione (1/–)	Area covered Area inquadrata
	35–70 mm f/3.5 (35 mm)	45–81	9,4–18,5	34×23–67×44
	35–70 mm f/3.5 (50 mm)	45–81	6,9–13,5	25×17–47×31
	35–70 mm f/3.5 (70 mm)	45–81	4,9–9,7	18×12–35×23
	50–135 mm f/3.5 (50 mm)	60,4–84,3	7,5–13,0	26,9×17,9–46,6×31,1
	50–135 mm f/3.5 (85 mm)	60,4–84,3	4,5–7,8	16,3×10,8–28,2×18,8
	50–135 mm f/3.5 (105 mm)	60,4-84,3	3,7–6,3	13,1×8,8–22,8×15,2
51	50–135 mm f/3.5 (135 mm)	60,4–84,3	2,9–5,1	10,5×7,0–18,4×12,2
	50–135 mm f/3.5	43,5	3,7	13,5×9
	105 mm f/1.3	49,5–76,6	3,4–6,7	12,2×8,1–23,9×16
	80–200 mm f/4 (80 mm)	62–87	4,4–8,3	16×11–30×19
	80–200 mm f/4 (105 mm)	62–87	3,3–6,3	12×8–23×15
	80–200 mm f/4 (135 mm)	62–87	2,6–4,9	9,4×6,2–18×12
	80–200 mm f/4 (200 mm)	62–87	1,8–3,4	6,5×4,3–12×8,2
	35–70 mm f/3.5 (35 mm)	36–49	6,6–9,5	24×16–23×34
	35–70 mm f/3.5 (50 mm)	36–49	4,8–6,9	17×12–25×17
	35–70 mm f/3.5 (70 mm)	36–49	3,4–5,0	12×8,2–18×12
	50–135 mm f/3.5 (50 mm)	44,8–51,9	4,7–6,7	16,9×11,3–23,9×16
	50-135 mm f/3.5 (85 mm)	44,8–51,9	2,8–4,0	10,2×6,8–14,4×9,6
	50–135 mm f/3.5 (105 mm)	44,8–51,9	2,3–3,2	8,2×5,5–11,7×7,8
6Т	50–135 mm f/3.5 (135 mm)	44,8–51,9	1,8–2,6	6,6×4,4–9,4×6,2
	50–135 mm f/3.5	37	2,8	10×6,6
	105 mm f/1.8	36,1–44,2	2,2–3,4	7,9×5,3–12,3×8,2
	80–200 mm f/4 (80 mm)	47–54	2,8–4,3	10×6,7–15×10
	80–200 mm f/4 (105 mm)	47–54	2,1–3,2	7,6×5–12×7,7
	80–200 mm f/4 (135 mm)	47–54	1,7–2,5	6×4–9×6
	80–200 mm f/4 (200 mm)	47–54	1,1–1,8	4×2,6–6,5×4,3
	35–70 mm f/3.5 (35 mm)	31–38	5,0–6,3	18×12–23×15
	35–70 mm f/3.5 (50 mm)	31–38	3,7–4,6	13×9–17×11
	35–70 mm f/3.5 (70 mm)	31–38	2,6–3,3	9,4×6,2–12×7,9
	50-135 mm f/3.5 (85 mm)	38–41	2,1–2,7	7,6×5,0–9,6×6,4
F	50–135 mm f/3.5 (105 mm)	38–41	1,7–2,1	6,0×4,0-7,8×5,2
5T+6T	50–135 mm f/3.5 (135 mm)	38–41	1,3–1,7	4,8×3,2–6,2×4,2
ŝ	105 mm f/1.8	29,8–33,1	1,6–2,3	5,8×3,9–8,2×5,4
	80–200 mm f/4 (80 mm)	41–43	2,1–2,8	7,6×5–10×6,7
	80–200 mm f/4 (105 mm)	41–43	1,5–2,2	5,4×3,6–8×5,3
	80–200 mm f/4 (135 mm)	41–43	1,2–1,7	4,3×2,9–6,1×4
	80–200 mm f/4 (200 mm)	41–43	0,84–1,2	3×2–4,3×2,9

#### **Bellows focusing attachment PB-6**

Order code Suitable lenses **Bellows** extension Magnification Support movement Dimensions

Weight

FPA003AA 20 mm – 200 mm 48 mm – 208 mm See table 180 mm 98 × 155 × 238 mm  $(W \times H \times L)$ 1000 g











#### **Extension bellows PB-6E**

Order code **Bellows** extention

Magnification

Dimensions

Weight

FPW21401 83 mm - 438 mm (PB-6 with PB-6E) see table 82 × 155 × 230 mm  $(W \times H \times D)$ 800 g

#### Macro copy stand PB-6M

Order code	FPW21301
Magnification	PB-6 bellows attachment with
	PB-6M macro copy stand;
	see table
Baseboard	one white acrylic board, one
	grey aluminium alloy board
Dimensions	90 × 144 × 27 mm
	$(W \times H \times D)$
Weight	150 g with acrylic board
	177 g with aluminium board

#### Slide copying adapter PS-6

Order code Originals to be copied Originals

FPW21201

35 mm film framed

(up to 4 mm frame thickness) or unframed in strips or rolls Suitable lenses 20 mm – 55 mm Reproduction ratio see table 6 mm upwards and downwards slideholder 9 mm to each side Bellows extension 60 mm Dimensions 88 × 118 × 42 mm  $(W \times H \times D)$ 300 g

Weight

Movable

#### **Bellows spacer PB-6D**

Order code Use

FPW21801 with the bellows space (two pieces required) a motorized camera can be used with the PB-6

#### Slide copier ES-1

Order code Function Use

Dimensions

Weight

FHW00301 slide copying micro Nikkor 55 mm f/2.8 and PK-13 or AF micro Nikkor 60 mm f/2.8 D and BR-5 or PB-6 bellows 72 mm  $\varnothing$  × 80 mm 150 g





mechanical/mechanical

Order code	FPW21701
Function	maintenance of the automatic
	diaphragm control between
	the camera and the bellow
	focusing attachment PB-6
	release plug
Use	for all cameras with a cable release plug

#### Double cable release AR-10

electrical/mechanical

Order code	FPW21901
Function	same as AR-7
Use	for all cameras with a remote
	shutter release plug; with adap-
	tercord MC-25 and for Nikon
	F90X

#### Grey card

Order code

**GRK**/FXA10064

#### Inversion ring BR-2A

Order code Mount Function FPW00202 52 mm  $\oslash$  / bayonet mounting a 52 mm  $\oslash$  lens to camera in inverted position

#### Adapter ring BR-5

Order code Mount Function

Use

FTW00401 52 mm  $\oslash$  / 62 mm  $\oslash$  mounting a 62 mm  $\oslash$  lens to camera in inverted position in conjunction with BR-2A only

#### **Conversion ring BR-3**

Order code Mount Function

Use

FPW00301 52 mm  $\oslash$  / bayonet adapter between bayonet mount on inverted lens to 52 mm threaded mount 52 mm  $\oslash$  filters and lens hoods







#### Auto ring BR-6

Order code Mount	FPW01301
wount	52 mm Ø / bayonet / shutter cable
Function	retention of automatic dia- phragm function for lenses mounted in inverted position by means of AR-7/AR-10 twin
	shutter cable
Use	52 mm $\oslash$ filtres and lens
	hoods

#### Adapter ring UR-F3

Order code FSW90301 Function connecting AF micro Nikkor 60 mm f/2.8 D to TTL macro flash SB-21 Nikon Brit



## **CLOSE-UP ACCESSORIES • ACCESSORI PER MACROFOTOGRAFIA**

## Magnifications with PB-6/PB-6E Rapporto di riproduzione con PB-6/PB-6E

Lens		Subject field	3	3	80 144 3 3 20 96	108 3 72	8 72 3 2 48	36 3 24	18 3 12	12 3 8	9 3 6	7.2 3 4.8	6 3 4	5.1 3 3.4	3		3	3.6 3 2.4	3.3 3 2.2	3 3 2	2.6 3 1.7	2.3 3 1.5	2 3 1.3	1.8 3 1.2	1.6 1.5 3 3 1.1 1	Campo		
Obiettivo		Reproduction ratio			53 1/43	1/3			23		43	53	63	73	8	3 9	93	103	113	123	143	163	183 2	203	223 243	Rapporto d	i ingrandimento	
20 mm f/2.8	1	Extension									72	_	103	123	14	4 1	64 ·	185	208	225	266	307	348 3	889	429 438	1	Allungamento	
20111111/2.0	Reverse	Working distance									38		36,9	36,4	4 36,	,1 3	5,8 3	15,5	35,3	35,2	35	34,8	34,6 3	4,5	34,4 34,4	Invertito	Distanza di ripresa	
24 mm f/2.8	1	Extension								83		111	135	160	) 18	4 2	08 2	233	257	282	330	379	428 438			1	Allungamento	
24 mm f/2	Reverse	Working distance								39,8		<b>9</b> 38,4	37,6	37	36,	.6 3	• 6,2 3	• 15,9 :	• 35,7	35,5	<b>•</b> 35,2	35	34,9 34,8			Invertito	Distanza di ripresa	
	2	Extension							48	84		1					Í	Í	Ť	T	Í	T				2	Allungamento	
28 mm f/2.8	Normal	Working distance							•	<u> </u>																Normale	Distanza di ripresa	
28 mm f/2	1	Extension				-		-	7,3	83 1	105	133	162	191	208 21	9 2	48 2	276	305	334	391 4	38				1	Allungamento	
28 mm f/3.5 PC	Reverse	Working distance								•	•	٠	•				•	•	•	•	•	•				Invertito	Distanza di ripresa	
	3		_			-		48	1 72	42,3 4	0,7	39,2	38,3	37,6	37,3 37,	,1 3	6,1 3	6,4	36,1	35,9	35,5 3	5,3		+	+	3		
35 mm f/2	Normal	Extension						•	•	•	•															Normale	Allungamento	
		Working distance				_		18,	6 9,6	3,6	0	177	209	249	) 28	5 2	21 3	357	393	438		_	_		+		Distanza di ripresa	
35 mm f/1.4	① Reverse	Extension								•	•	•	•	•	, 20	•	•	•	•	<b>1</b>						① Invertito	Allungamento	
		Working distance							47			40,7		38,6					36,8	36,4		_					Distanza di ripresa	
35 mm f/2.8	③ Normal	Extension						48		108 1	44	180	208	252	2 28	8 3	24 3	360	396	438						③ Normale	Allungamento	
55 1111 17 210	Normal	Working distance						1.6	2 15,2		-	4,4	3,4	2,3			-	-	0,4	0,1						Normaic	Distanza di ripresa	
35 mm f/2.8 PC	1	Extension							83	105 1	41	177	208	249	28	5 3	21 3	357	393	438						1	Allungamento	
55 mm 1/2.8 FC	Reverse	Working distance							48,5	45,5 4	2,5	40,7	39,6	38,6	5 38	B 3	7,5 3	17,1	36,8	36,4						Invertito	Distanza di ripresa	
	3	Extension						48	103	155 2	208	258	310	361	41	3 438										3	Allungamento	
50 mm f/1.2	Normal	Working distance						64	34.3	25,7 2	• 1,3	• 18,8	17,1	15,9	9 15	<b>1</b> 4,6										Normale	Distanza di ripresa	
50 mm f/1.8 50 mm f/1.4	1	Extension							78 106		-	261	313	364		6 438										1	Allungamento	
50 11111 1/ 1.4	Reverse	Working distance							<b>6</b> 9 59	51 4	¢	43,8	42,1	40,9	9 40	D 39,6										Invertito	Distanza di ripresa	
	4	Extension						48	110	165 20	- C	275	330	440				+	-			+		1	+	4	Allungamento	
FF {/2 0	Normal	Working distance						•	•	• •		•	•	•	•	•										Normale	Distanza di ripresa	
55 mm f/2.8 Micro			_			-		65	29,1 92 120	19,9 16, 175 208		12,6 285	10,8 340	8,5 395	8, 438		+	+	+			+		+	+			
inicio	Reverse	Extension							••	• •	•	•	•	•	•											Invertito	Allungamento	
		Working distance				_		48	71 61	52 48,8	-	44,5 290	42,7	- í-	4 40,6 5 438		-	-	_	_	_	+	_	-			Distanza di ripresa	
	© Normal	Extension						•	•		•	•	940	400	•											© Normale	Allungamento	
58 mm f/1.2 Noct		Working distance						74	32,7	_	-	15,3	13,4	12		ļ				_		_					Distanza di ripresa	
	® Reverse	Extension							8 125	183 208	41	299	357	415	438											⑥ Invertito	Allungamento	
	nerense	Working distance							6 63	53 50	-	45,1	43,2	41,8	41,3											interato	Distanza di ripresa	
	3	Extension					48	3 85	170 20	18 255 3	340	438														3	Allungamento	
85 mm f/1.4	Normal	Working distance					1 21	0 140	97 9	0 83	76	71														Normale	Distanza di ripresa	
85 mm f/2	6	Extension				90 1	0 103	3 146	208	_	401 438	1														6	Allungamento	
	Reverse	Working distance				290 290	0 200	) 120	• 83		<b>•</b> • 55 53															Invertito	Distanza di ripresa	
105 mm f/2.8	3	Extension					48	105	208	315	438															3	Allungamento	
Micro	Normal	Working distance					¢ 300	170	120	100	92															Normale	Distanza di ripresa	
105 mm f/1.8	6	Extension		133	142	151		208 221	326	438				+								+				6	Allungamento	
105 mm f/2.5	Reverse	Working distance		•	•	•	• •	• •	•	•																Invertito	Distanza di ripresa	
	3	Extension		670	450		0 240 18 68	150 140 135	86 208 270	68 405 438				+			-	-		-		-		-		3	Allungamento	
135 mm f/3.5	Normal	Working distance				1	• •		• •	• •																Normale	-	
135 mm f/2.8		5	180 1	94 2	208 214	_	20 420 5 248		230 210 438	190 190		_	_	_	_		-	+	-	_	_	+	_	-	+		Distanza di ripresa	
135 mm f/2	© Reverse	Extension	•	•	• •	•		•	•																	⑥ Invertito	Allungamento	
		Working distance	··· 14	100 6	580 570	_			100					+	_			_		_	-	_	_	-	+		Distanza di ripresa	
180 mm f/2.8 ED	③ Normal	Extension			48			208	360 43																	③ Normale	Allungamento	
		Working distance			83	) 69	0 510	) 310	240 23	10																	Distanza di ripresa	
200 mm f/4	③ Normal	Extension			48	67	7 100	208	400 431																	③ Normale	Allungamento	
200 1111 1/4	IRUITION	Working distance			1200	920	0 720	) 520	420 421															1		Normale	Distanza di ripresa	

#### Working distance:

Distance between subject (in sharp focus) and the front edge of the lens barrel. If the lens is reversemounted, this distance is the distance between the subject and the rear edge of the lens. Notes:

Magnification at setting. – If there are several lenses, the magnification data applies only to the first lens (e.g. for 24 mm f/2.8 and f/2.0, it applies to 24 mm f/2.8. – The 135 mm f/2.0 and PC-Nikkor 28 mm f/3.5 lenses cannot be reverse-mounted since the diameters of the front rings are the Jarre – For close-un and macrophotography.

ings are too large. – For close-up and macrophotography, we particularly recommend the following lens: Micro Nikkor 55 mm ff2.8 and Micro Nikkor 105 mm ff2.8.

= only with PB-6

① Optimum picture quality with f/8

② The smaller the aperture the better the picture guality. Unsuitable for reproduction.

③ The smaller the aperture the better the picture quality.

④ Optimum picture quality with F/8; the quality deteriorates with smaller apertures. The 50 mm f/1.2 lens is not suitable for reproduction.

(5) Unsuitable for reproduction.

⑥ The picture quality in the corners becomes poorer with low magnification.

#### Distanza di lavoro:

Distanza compresa tra il soggetto ed il bordo anteriore dell'obiettivo. Invertendo l'obiettivo, la distanza ottenuta è quella compresa tra il soggetto ed il bordo porta-obiettivi del soffietto. Note:

I rapporti di riproduzione sono quelli ottenuti all'infinito. – Se più di un obiettivo figura in una colonna (ad. es.24/2. 8 24/2) i rapporti di riproduzione si riferiscono al primo menzionato. – II 135/2 ed il 28/3.5 PC non possono essere invertiti. – Nella fotografia macro sono particolamente consigliati il 55 mm f/2.2 Micro ed il 105 mm f/2.8 Micro.

= solamente con PB-6 = con PB-6 et PB-6E ① Qualità ottimale d'immagine a f/8.

- ② Più chiudete il diaframma dell'obiettivo, più migliora la qualità. Non conviene per la riproduzione.
- ③ Più chiudete il diaframma dell'obiettivo, più migliora la qualità.
- ④ La qualità d'immagine è ottimale a f/8 e diminuisce a diaframmi più chiusi. Il 50 mm f/1.2 non conviene per la riproduzione.
- (5) Non conviene per la riproduzione

⑥ La qualità d'immagine diminuisce ai bordi con deboli rapporti di ingrandimento.

= with PB-6 and PB-6E in combination

## Magnifications with PS-6 Rapporto di riproduzione PS-6

Lens Obiettivo		Subject field	∞ 3 ∞ 1/∞3	360 3 240 1/103	180 3 120 1/53	144 3 96 1/43	3 72	72 3 48 1/23	36 3 24 13	18 3 12 23	3 8	4	3 3 5 4.8	6 3 4 63	5.1 3 3.4 73	4.5 3 3 83	4 3 2.7 93	3.6 3 2.4 103	3.3 3 2.2 113	3 3 2 123	2.6 3 1.7 143	2.3 3 1.5 163	2 3 1.3	1	3 .1	1.5 3 1 243	Campo Rapporto di	ingrandimento
20	_	Extension											72 83	103	123	144	166	i								Τ		Allungamento
20 mm f/2.8	Reverse	Working distance											38 38	37	36	36	36										Invertito	Distanza di ripresa
24 mm f/2.8	Davana	Extension										83	111	135	160 1	70											1	Allungamento
24 mm f/2	Reverse	Working distance										40	38	38	37 3	<b>1</b> 37											Invertito	Distanza di ripresa
28 mm f/2.8		Extension									-	83 10	5 133	162 1	70												Invertito	Allungamento
f/2, f/3.5 PC	Reverse	Working distance										42 4	1 39	38 3	1												Invertito	Distanza di ripresa
35 mm f/2, f/1.4,	Reverse	Extension									89 105	14	141 165														Invertito	Allungamento
f/2.8, f/2.8 PC	Keverse	Working distance									48 46	4	3 41														Invertito	Distanza di ripresa
	Normal	Extension								48 103 1																	Manuala	Allungamento
50 mm f/1.2 50 mm f/1.8	Normai	Working distance							64	34	26																Normale	Distanza di ripresa
50 mm f/1.4	Reverse	Extension							7	8 106	156																Invertito	Allungamento
	Keverse	Working distance							6	9 59	51																Invertito	Distanza di ripresa
		Extension						4	18 55	1	29 1																	Allungamento
55 mm f/2.8	Normal	Working distance						6	55 57		25																Normale	Distanza di ripresa
Micro		Extension							9	2 120	152																	Allungamento
	Reverse	Working distance							7	1 61	55																Invertito	Distanza di ripresa

### Magnifications with PB-6M Rapporto di riproduzione con PB-6M

Lens		Subject field	∞ 3 ∞	360 3 240	3	3	108 3 72	72 3 48	36 3 24	18 3 12	12 3 8	2	9 7.2 3 3 6 4.8	6 3 4	5.1 3 3.4	4.5 3 3	4 3 2.7	3.6 3 2.4	3.3 3 2.2	3 3 2	2.6 3 1.7	2.3 3 1.5	2 3 1.3	1.8 3 1.2	1.6 3 1.1	5 1. 3	i Campo	
Obiettivo	1	Reproduction ratio	1/∞3	1/103				1/23	13				43 53	63	73	83	93	103	113	123		163	183	203			3 Rapporto d	e grossissement
20 mm f/2.8		Extension											72 83	103	123	144	164 1	69 1										Allungamento
20 11111 1/2.0	Reverse	Working distance											38 38	37	36	36	36	36									Invertito	Distanza di ripresa
24 mm f/2.8		Extension										83	3 111	135	160	173												Allungamento
24 mm f/2	Reverse	Working distance										1 40	38	38	37	37											Invertito	Distanza di ripresa
		Extension								48 57	8	38 1																Allungamento
28 mm f/2.8 28 mm f/2	Normal	Working distance								8 5	_	0															Normal	Distanza di ripresa
28 mm f/3.5 PC		Extension									8	33 1	05 133	162 1	172													Allungamento
	Reverse	Working distance									2	12 ·	41 39	38 3	38												Invertito	Distanza di ripresa
35 mm f/2		Extension							4	8 72	10	8 1	44 154															Allungamento
35 mm f/1.4	Normal	Working distance							1	9 10	4																Normal	Distanza di ripresa
35 mm f/2.8		Extension									89 10	5 1	41 163															Allungamento
35 mm f/2.8 PC	Reverse	Working distance									48 40	5	43 41														Invertito	Distanza di ripresa
		Extension							48	103	1	56 1																Allungamento
50 mm f/1.2 50 mm f/1.8	Normal	Working distance							۲ <u>ا</u> 64	34		1 26															Normal	Distanza di ripresa
50 mm f/1.4		Extension								78 10	1	59 1																Allungamento
	Reverse	Working distance								69 59	-	1 51															Invertito	Distanza di ripresa
	Namal	Extension							48	110	144																Namal	Allungamento
55 mm f/2.8	Normal	Working distance							65	29	23																Normal	Distanza di ripresa
Micro	Reverse	Extension			T					92 121	155								T			T		Τ			1	Allungamento
	neverse	Working distance								71 61	54																Invertito	Distanza di ripresa

#### Working distance:

Distance between subject (sharply focused) and the front edge of the lens barrel. If the lens is reversemounted, this distance is the distance between the subject and the rear edge of the lens.

#### Notes:

#### 1) Magnification at setting.

- If there are several lenses, the magnification data applies only to the first lens (e. g. for 24 mm f/2.8 and f/2.0, it applies to 24 mm f/2.8).
- The 135 mm f/2.0 and PC-Nikkor 28 mm f/3.5 lenses cannot be reverse-mounted since the diameters of the front rings are too large
- diameters of the front rings are too large. 4) For close-up and macrophotography, we particularly recommend the following lenses: Micro Nikkor 55 mm f/2.8 and Micro Nikkor 105 mm f/2.8

#### Distanza di lavoro:

Distanza compresa tra il soggetto ed il bordo anteriore dell'obiettivo. Invertendo l'obiettivo, la distanza ottenuta è quella compresa tra il soggetto ed il bordo porta-obiettivi del soffietto

#### Note:

- 1) I rapporti di riproduzione sono quelli ottenuti all'infinito.
- Se più di un obiettivo figura in una colonna (ad. es. 24/2.8 e 24/2) i rapporti di riproduzione si riferiscono al primo menzionato.
- Il 135/2 ed il 28/3.5 PC non possono essere invertiti.
- Nella fotografia macro sono particolarmente consigliati il 55 mm f/2.8 Micro ed il 105 mm f/2.8 Micro.

#### Auto extension rings with AI diaphragm coupling

#### **Extension ring PK-11A**

Order code Extension Dimensions Weight FPW00703 8 mm 64.4 mm  $\emptyset$  × 17.8 mm 50 g



#### **Extension ring PK-12**

Order code Extension Dimensions Weight FPW00802 14 mm 64.4 mm ∅ × 23.6 mm 75 g





Order code Extension Dimensions FPW00902 27.5 mm 64.4 mm ∅ × 30.5 mm



#### **Extension ring PN-11**

Order code Extension Dimensions Weight FPW01002 52.5 mm 70.5 mm ∅ × 67 mm 245 g



#### **Extension ring combination**

Extension ring combination	Extension (mm)
PK-11A	8
PK-12	14
PK-11A+PK12	22
PK-13	27.5
PK-11A+PK-13	35.5
PK-12+PK-13	41,5
PK-11A+PK-12+PK-13	49,5
## **CLOSE-UP ACCESSORIES • ACCESSORI PER MACROFOTOGRAFIA**

The Nikon auto extension rings can be inserted in your camera bayonet with a simple action and permit a large number of different magnifications. The three PK rings – PK-11, 12 and 13 – and the PN-11 ring can be used either singly or in combination between camera and lens and retain the automatic function and meter coupling of the Nikkor and Nikon Series lenses. In other words, the picture composition, focusing and metering can be carried out at the bright, full-aperture position without having to stop down the lens manually before shooting. The extension rings have no effect on automatic exposure control of the corresponding Nikon cameras.

I tre anelli – PK-11, 12 et 13 – e l'anello PN-11 si montano tra i corpo macchina e l'obiettivo da soli od in combinazione. Essi conservano l'automatismo di preselezione del diaframma e di accoppiamento esposimetrico con gli obiettivi Nikkor Al e Nikon Serie E. Usufite quindi del vantaggio della luminosità massima su tutti i tempi di visione e di misurazione. È inutile diaframmare manualmente prima di scattare. All'occorrenza, questi anelli permettono anche la regolazione automatica dell'esposizione.

### Nikkor 20 mm f/2.8

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1/8	∞×∞-7,5×11,2 ∞×∞-18,9×28,4	∞–9,8 ∞–25,0	1,0–1,1
PK-11 A	1/2,6–1/2	2,4×3,6–1,8×2,7 6,1×9,2–4,6×7,0	5,4–5,0 13,7–12,7	1,3–1,4
РК-12	1/1,5–1/1,2	1,4×2,1–1,2×1,8 3,5×5,3–3,0×4,4	4,7–4,7 12,1–11,8	1,6–1,7
PK-11 A + PK-12	1,1–1,2	0,88×1,3-0,79×1,2 2,2×3,4-2,0×3,0	4,6–4,7 11,8–11,8	2,0-2,1
РК-13	1,3–1,5	0,70×1,1-0,64×0,97 1,8×2,7-1,6×2,5	4,7–4,7 11,9–12,1	2,3–2,4
PK-11 A + PK-13	1,7–1,9	0,55×0,82–0,51×0,76 1,4×2,1–1,3×1,9	4,9–4,9 12,4–12,6	2,8–2,9
PK-12 + PK-13	2,0-2,2	0,47×0,70-0,44×0,66 1,2×1,8-1,1×1,7	5,0–5,1 12,8–13,0	3,1–3,3
PK-11 A + PK-12 + PK-13	2,4–2,5	0,39×0,59–0,37×0,56 0,99×1,5–0,94×1,4	5,3–5,4 13,4–13,7	3,7–3,9

### AF Nikkor 24 mm f/2.8 D, Nikkor 24 mm f/2.8

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1/8,8	∞×∞-8,4×12,5 ∞×∞-21,2×31,8	∞−11,8 ∞−30,0	1,0–1,1
РК-11 А	1/3,0–1/2,3	2,9×4,3–2,1×3,2 7,3×11,0–5,4×8,2	6,5–5,8 16,4–14,8	1,3–1,4
РК-12	1/1,7–1/1,5	1,6×2,5–1,4×2,1 4,2×6,3–3,5×5,2	5,4–5,3 13,8–13,4	1,5–1,7
PK-11 A + PK-12	1/1,1-1,0	1,0×1,6–0,93×1,4 2,7×4,0–2,4×3,5	5,2–5,1 13,1–13,1	1,9–2,0
РК-13	1,1–1,2	0,84×1,3-0,76×1,1 2,1×3,2-1,9×2,9	5,2–5,2 13,1–13,2	2,2–2,3
PK-11 A + PK-13	1,5–1,6	0,65×0,97–0,6×0,9 1,6×2,5–1,5×2,3	5,3–5,3 13,4–13,6	2,6-2,8
PK-12 + PK-13	1,7–1,8	0,56×0,83-0,52×0,78 1,4×2,1-1,3×2,0	5,4–5,5 13,8–14,0	2,9–3,1
PK-11 A + PK-12 + PK-13	2,0-2,1	0,47×0,70-0,44×0,66 1,2×1,8-1,1×1,7	5,6–5,7 14,3–14,5	3,4–3,6

#### AF Nikkor 28 mm f/2.8 D

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
_	1/∞−1/7,6	∞×∞-7,2×10,8 ∞×∞-18,2×27,4	∞−11,8 ∞−30,1	1,0–1,1
PK-11 A	1/3,6–1/2,4	3,4×5,1–2,3×3,5 8,6×13,0–5,9×8,8	7,5–6,3 19,0–16,0	1,3–1,5
РК-12	1/2,1–1/1,6	1,9×2,9–1,5×2,3 4,9×7,4–3,9×5,8	6,0–5,6 15,1–14,2	1,6–1,8
PK-11 A + PK-12	1/1,3–1/1,1	1,2×1,9–1,1×1,6 3,1×4,7–2,7×4,0	5,4–5,4 13,8–13,6	2,0-2,2
РК-13	1,0–1,1	0,99×1,5–0,87×1,3 2,5×3,8–2,2×3,3	5,3–5,3 13,6–13,6	2,3–2,5
PK-11 A + PK-13	1,2–1,4	0,77×1,1-0,69×1,0 1,9×2,9-1,8×2,6	5,4–5,4 13,7–13,8	2,7–3,0
PK-12 + PK-13	1,4–1,6	0,66×0,98-0,60×0,90 1,7×2,5-1,5×2,3	5,5–5,6 13,9–14,2	3,1-3,4
PK-11 A + PK-12 + PK-13	1,7–1,9	0,55×0,82–0,51×0,77 1,4×2,1–1,3×1,9	5,7–5,8 14,4–14,7	3,7–3,9

#### Nikkor 35 mm f/1.4, 35 mm f/2, 35 mm f/2.8

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1/5,5	∞×∞-5,2×7,9 ∞×∞-13,3×19,9	∞–11,8 ∞–29,9	1,0–1,3
PK-11 A	1/4,5–1/2,5	4,3×6,4–2,4×3,5 10,8×16,2–6,0×8,9	10,4–7,8 26,3–19,7	1,3–1,7
PK-12	1/2,6–1/1,8	2,4×3,6–1,7×2,5 6,2×9,3–4,2×6,3	7,9–7,0 20,0–17,7	1,6-2,0
PK-11 A + PK-12	1/1,6–1/1,3	1,6×2,3–1,2×1,8 3,9×5,9–3,0×4,5	6,9–6,6 17,4–16,7	2,1-2,4
РК-13	1/1,3–1/1,1	1,2×1,9–1,0×1,5 3,1×4,7–2,5×3,8	6,6–6,5 16,8–16,5	2,4–2,8
PK-11 A + PK-13	1,0–1,2	0,96×1,4–0,81×1,2 2,4×3,7–2,1×3,1	6,5–6,5 16,5–16,6	2,9–3,3
PK-12 + PK-13	1,2–1,3	0,82×1,2–0,71×1,1 2,1×3,1–1,8×2,7	6,5–6,6 16,6–16,8	3,3–3,8
PK-11 A + PK-12 + PK-13	1,4–1,6	0,69×1,0-0,61×0,91 1,7×2,6-1,5×2,3	6,7–6,8 16,9–17,2	3,9-4,4

### Nikkor 50 mm f/1.2, 50 mm f/1.8

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1/6,7	∞×∞-6,3×9,5 ∞×∞-16,1×24,1	∞–17,7 ∞–44,9	1–1,3
PK-11 A	1/6,4–1/3,3	6,1×9,1–3,1×4,7 15,5×23,2–7,9×11,8	17,2–11,1 43,8–28,2	1,3–1,6
РК-12	1/3,7–1/2,4	3,5×5,2–2,3×3,4 8,8×13,3–5,7×8,6	11,8–9,5 30,0–24,0	1,5–1,9
PK-11 A + PK-12	1/2,3–1/1,7	2,2×3,3–1,6×2,5 5,6×8,4–4,2×6,3	9,4–8,5 23,9–21,5	1,9–2,2
РК-13	1/1,9–1/1,5	1,8×2,7–1,4×2,1 4,5×6,8–3,5×5,3	8,7–8,1 22,0–20,7	2,1–2,5
PK-11 A + PK-13	1/1,5–1/1,2	1,4×2,1–1,1×1,7 3,5×5,2–2,9×4,3	8,1–7,9 20,7–20,1	2,5-3,0
PK-12 + PK-13	1/1,2-1,0	1,2×1,8–0,99×1,5 3,0×4,5–2,5×3,8	7,9–7,9 20,2–19,9	2,9–3,3
PK-11 A + PK-12 + PK-13	1,0–1,1	0,98×1,5–0,85×1,3 2,5×3,8–2,2×3,2	7,9–7,9 19,9–20,0	3,3–3,8

### AF Nikkor 50 mm f/1.8, Nikkor 50 mm f/1.8

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1/6,6	∞×∞-6,3×9,4 ∞×∞-15,9×23,8	∞–17,7 ∞–44,9	1–1,3
PK-11 A	1/6,5–1/3,3	6,1×9,1–3,1×4,6 15,5×23,2–7,8×11,8	17,3–11,2 44,0–28,4	1,3–1,7
PK-12	1/3,7–1/2,4	3,5×5,2–2,2×3,4 8,8×13,3–5,7×8,5	12,0–9,6 30,4–24,3	1,6-2,0
PK-11 A + PK-12	1/2,4–1/1,7	2,2×3,3–1,6×2,5 5,6×8,4–4,2×6,2	9,5–8,6 24,3–21,9	2,0-2,4
РК-13	1/1,9–1/1,5	1,8×2,7–1,4×2,1 4,5×6,8–3,5×5,3	8,8–8,3 22,4–21,0	2,3–2,7
PK-11 A + PK-13	1/1,5–1/1,2	1,4×2,1–1,1×1,7 3,5×5,2–2,9×4,3	8,3-8,0 21,0-20,4	2,7–3,2
PK-12 + PK-13	1/1,2–1,1	1,2×1,8–0,99×1,5 3,0×4,5–2,5×3,8	8,1-8,0 20,5-20,3	3,1-3,6
PK-11 A + PK-12 + PK-13	1,0–1,1	0,98×1,5–0,85×1,3 2,5×3,8–2,2×3,2	8,0-8,0 20,3-20,3	3,7–4,2

### AF Micro-Nikkor 60 mm f/2.8 D

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1,0	$\infty$ x ∞ - 0,88 × 1,3 $\infty$ x ∞ - 2,2 × 3,4	∞–8,6 ∞–21,9	1,0-6,6
РК-11 А	1/7,5–1,2	7,1×10,6–0,77×1,2 18,0×27,0–2,0×2,9	23,0-8,7 58,5-22,1	1,3–7,9
РК-12	1/4,3–1,4	4,0×6,1–0,70×1,0 10,3×15,4–1,8×2,7	15,7–8,8 39,8–22,3	1,5-8,9
PK-11 A + PK-12	1/2,7–1,5	2,6×3,9–0,62×0,94 6,5×9,8–1,6×2,4	12,3–9,0 31,2–22,7	1,9–10,4
РК-13	1/2,2–1,6	2,1×3,1–0,58×0,87 5,2×7,9–1,5×2,2	11,2–9,1 28,5–23,1	2,2–11,5
PK-11 A + PK-13	1/1,7–1,8	1,6×2,4–0,53×0,79 4,1×6,1–1,3×2,0	10,4–9,3 26,3–23,6	2,6–13,2
PK-12 + PK-13	1/1,4–1,9	1,4×2,0–0,50×0,74 3,5×5,2–1,3×1,9	10,0–9,5 25,5–24,0	3,0-14,5
PK-11 A + PK-12 + PK-13	1/1,2–2,1	1,1×1,7–0,46×0,68 2,9×4,4–1,2×1,7	9,8–9,7 24,9–24,6	3,5-16,4

Nikkor 105	mm f/2.5, '	105 mm f/1.8

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1/8,3	∞×∞-7,9×11,9 ∞×∞-20,0×30,0	∞–42 ∞–107	1,0–1,3
PK-11 A	1/13,1–1/5,1	12,4×18,6–4,8×7,2 31,5×47,3–12,2×18,3	61,6–28,0 157–73,5	1,2–1,5
PK-12	1/7,5–1/3,9	7,1×10,6-3,7×5,6 18,0×27,0-9,5×14,2	38,6–24,2 98,1–62,0	1,3–1,6
PK-11 A + PK-12	1/4,8–1/3,0	4,5×6,8–2,9×4,3 11,5×17,2–7,3×10,9	27,7–21,0 70,2–53,2	1,5–1,8
PK-13	1/3,8–1/2,6	3,6×5,4–2,5×3,7 9,2×13,7–6,3×9,4	23,9–19,5 60,8–49,4	1,6–2,0
PK-11 A + PK-13	1/3,0-1/2,2	2,8×4,2–2,1×3,1 7,1×10,6–5,2×7,9	20,1–18,0 52,5–45,6	1,8–2,2
PK-12 + PK-13	1/2,5–1/1,9	2,4×3,6–1,8×2,8 6,1×9,1–4,7×7,0	19,1–17,2 48,6–43,7	2,0-2,4
PK-11 A + PK-12 + PK-13	1/2,1–1/1,7	2,0×3,0–1,6×2,4 5,1×7,6–4,1×6,1	17,8–16,5 45,1–41,9	2,2–2,6

### Micro-Nikkor 55 mm f/2.8

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
_	1/∞−1/1,9	$\infty \times \infty - 1,8 \times 2,7$ $\infty \times \infty - 4,6 \times 6,9$	∞–9,8 ∞–25,0	1,0–2,3
PK-11 A	1/6,9–1,15	6,5×9,7–1,4×2,2 16,5×24,8–3,6×5,5	19,6–9,2 49,7–23,5	1,3–2,8
РК-12	1/3,9–1/1,3	3,1×4,7–1,2×1,9 9,4×14,1–3,7×5,6	13,4–9,0 34,1–22,9	1,5–3,1
PK-11 A + PK-12	1/2,5–1/1,1	2,4×3,5–1,0×1,6 6,0×9,0–2,7×4,0	10,6–8,9 27,1–22,5	1,9–3,6
РК-13	1/2,0–1,0	1,9×2,8–0,94×1,4 4,8×7,2–2,4×3,6	9,8–8,8 24,9–22,5	2,2-4,0
PK-11 A + PK-13	1/1,5–1,1	1,5×2,2–0,83×1,2 3,7×5,6–2,1×3,2	9,1–8,9 23,2–22,6	2,6-4,6
РК-12 + РК-13	1/1,3–1,2	1,3×1,9–0,76×1,1 3,2×4,8–1,9×2,9	8,9–9,0 22,5–22,7	3,0-5,1
PK-11 A + PK-12 + PK-13	1/1,1–1,4	1,0×1,6-0,68×1,0 2,7×4,0-1,7×2,6	8,7–9,1 22,2–23,1	3,5-5,7

### Nikkor 85 mm f/2, 85 mm f/1,4

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1/8,1	∞×∞-7,6×11,4 ∞×∞-19,4×29,0	∞–3,5 ∞–85,0	1,0–1,3
РК-11 А	1/10,6-1/4,6	10,0×15,1–4,3×6,5 25,5×38,2–11,0×16,5	41,9–22,1 106,0–56,2	1,2–1,6
РК-12	1/6,1–1/3,5	5,7×8,6-3,3×4,9 14,6×21,9-8,3×12,5	26,9–18,6 68,4–47,3	1,4–1,8
PK-11 A + PK-12	1/3,9–1/2,6	3,7×5,5–2,5×3,7 9,3×13,9–6,3×9,4	19,9–16,1 30,4–40,8	1,7–2,1
РК-13	1/3,1–1/2,2	2,9×4,4–2,1×3,2 7,4×11,1–5,4×8,0	17,5–15,0 44,4–38,2	1,9–2,3
PK-11 A + PK-13	1/2,4–1/1,8	2,3×3,4–1,7×2,6 5,7×8,6–4,4×6,6	15,5–14,0 39,3–35,7	2,2–2,7
PK-12 + PK-13	1/2,0-1/1,6	1,9×2,9–1,5×2,3 4,9×7,4–3,9×5,9	14,5–13,6 36,9–34,5	2,5–2,9
PK-11 A + PK-12 + PK-13	1/1,7–1/1,4	1,6×2,4–1,3×2,0 4,1×6,2–3,4×5,1	13,8–13,2 34,9–33,4	2,8–3,3

#### Micro-Nikkor 105 mm f/2.8

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1/2	∞×∞-1,9×2,8 ∞×∞-4,8×7,2	∞–16,1 ∞–40,9	1,0-3,2
PK-11 A	1/13–1/1,7	12,4×18,6–1,6×2,4 31,5×47,3–4,0×6,0	63,6–15,4 162–39,1	1,2–3,8
РК-12	1/7,5–1/1,5	7,1×10,6-4,1×2,1 18,0×27,0-3,6×5,4	40,6–15,0 103–38,2	1,4-4,3
PK-11 A + PK-12	1/4,8–1/1,3	4,5×6,8–1,2×1,8 11,5×17,2–3,1×4,7	29,7–14,7 75,3–37,4	1,6-5,0
РК-13	1/3,8–1/1,2	3,6×5,4–1,7×1,7 9,2×13,7–2,9×4,3	25,9–14,6 65,9–37,1	1,8–5,5
PK-11 A + PK-13	1/3,0-1/1,1	2,8×4,2–1,0×1,5 7,1×10,6–2,6×3,9	22,7–14,5 57,6–36,9	2,1-6,2
PK-12 + PK-13	1/2,5–1,0	2,4×3,6–0,94×1,4 6,1×9,1–2,4×3,6	21,2–14,5 53,7–36,8	2,3-6,8
PK-11 A + PK-12 + PK-13	1/2,1-1,1	2,0×3,0-0,86×1,3 5,1×7,6-2,2×3,3	19,8–14,5 50,2–36,9	2,6–7,6

### Nikkor 135 mm f/2, 135 mm f/2.8, 135 mm f/3.5

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1/7,5	∞×∞-7,1×10,6 ∞×∞-18,0×27,0	∞–51,3 ∞–130	1,0–1,5
PK-11 A	1/16,9–1/5,2	15,9×23,9–4,9×7,4 40,5×60,7–12,5×18,7	101–39,3 256–99,8	1,2–1,7
РК-12	1/9,6-1/4,2	9,1×13,7–4,0×6,0 23,1×34,7–10,1×15,2	62,5–34,4 159–87,3	1,4–1,9
PK-11 A + PK-12	1/6,1-1/3,4	5,8×8,7–3,2×4,8 14,7×22,1–8,1×12,2	44,2–30,2 112–76,7	1,6–2,2
РК-13	1/4,9–1/3,0	4,6×7,0–2,8×4,2 11,8×17,7–7,1×10,7	37,9–28,2 96,2–71,7	1,8–2,4
PK-11 A + PK-13	1/3,8–1/2,5	3,6×5,4–2,4×3,6 9,1×13,7–6,1×9,1	32,3–26,2 82,0–66,6	2,0–2,7
PK-12 + PK-13	1/3,3–1/2,3	3,1×4,6–2,1×3,2 7,8×11,7–5,4×8,2	29,6–25,1 75,2–63,7	2,2–2,9
PK-11 A + PK-12 + PK-13	1/2,7–1/2,0	2,6×3,9–1,9×2,8 6,5×9,8–4,8×7,2	27,1–24,0 68,9–60,9	2,3-3,2

### Micro-Nikkor 200 mm f/4.0 IF

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
_	1/∞−1/2,0	$\infty$ ×∞−1,9×2,8 $\infty$ ×∞−4,8×7,2	∞–28,0 ∞–71,1	1,0
PK-11 A	1/25,0-1/1,8	23,6×35,4–1,7×2,6 60,0×90,0–4,3×6,5	212–27,2 538–69,0	1,1
PK-12	1/14,3–1/1,7	13,5×20,2–1,6×2,4 34,3×51,4–4,0×6,1	128–26,7 325–67,8	1,3
PK-11 A + PK-12	1/9,1–1/1,5	8,6×12,9–1,5×2,2 21,8×32,7–3,7×5,6	87,2–26,2 222–66,5	1,4
РК-13	1/7,3–1/1,5	6,9×10,3–1,4×2,1 17,5×26,2–3,5×5,3	73,1–25,9 186–65,8	1,5
PK-11 A + PK-13	1/5,6-1/1,4	5,3×8,0–1,3×1,9 13,5×20,3–3,3×4,9	60,5–25,6 154–65,1	1,7
PK-12 + PK-13	1/4,8–1/1,3	4,6×6,8–1,2×1,8 11,6×17,3–3,1×4,6	54,5–25,4 138–64,6	1,8
PK-11 A + PK-12 + PK-13	1/4,0-1/1,2	3,8×5,7–1,1×1,7 9,7×14,5–2,9×4,3	48,5–25,3 123–64,2	2,0

### AF Micro-Nikkor 105 mm f/2.8

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1,0	∞×∞-0,95×1,4 ∞×∞-4,2×3,6	∞–12,4 ∞–31,4	1,0–5,7
PK-11 A	1/13,1–1,1	12,4×18,6–0,8×1,3 31,5×47,3–2,2×3,2	62,6–12,4 15,9–31,5	1,2–6,4
PK-12	1/7,5–1,2	7,1×10,6–0,79×1,2 18,0×27,0–2,0×3,0	39,5–12,4 100–31,6	1,3–7,0
PK-11 A + PK-12	1/4,8–1,3	4,5×6,8–0,73×1,1 11,5×17,2–1,8×2,8	28,5–12,6 72,4–31,9	1,5–7,8
PK-13	1/3,8–1,4	3,6×5,4–0,69×1,0 9,2×13,7–1,7×2,6	24,8–12,7 62,9–32,1	1,7–8,4
PK-11 A + PK-13	1/3,0–1,5	2,8×4,2-0,64×0,96 7,1×10,6-1,6×2,4	21,5–12,8 54,7–32,6	1,9–9,3
PK-12 + PK-13	1/2,5–1,6	2,4×3,6-0,60×0,91 6,1×9,1-1,5×2,3	20,0–13,0 50,8–32,9	2,1–10,0
PK-11 A + PK-12 + PK-13	1/2,1–1,7	2,0×3,0-0,57×0,85 5,1×7,6-1,4×2,2	18,6–13,1 47,3–33,4	2,4–11,0

### AF Nikkor ED 180 mm f/2.8 IF

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1/6,4	∞×∞-6,1×9,1 ∞×∞-15,4×23,1	∞–61,3 ∞–155,6	1,0–1,9
PK-11 A	1/22,5–1/5,0	21,3×31,9–4,7×7,1 54,0×81,0–12,0×18,0	173,2–51,5 440,0–130,7	1,2–2,2
PK-12	1/12,8-1/4,3	12,1×18,2–4,0×6,1 30,9×46,3–10,3×15,4	105,1–46,6 267,1–118,4	1,3–2,5
PK-11 A + PK-12	1/8,2-1/3,6	7,7×11,6–3,4×5,1 19,6×29,5–8,6×13,0	72,3–42,1 183,7–106,9	1,5–2,8
PK-13	1/6,5–1/3,2	6,2×9,3–3,1×4,6 15,7×23,6–7,8×11,7	61,0–39,8 154,8–101,1	1,7–3,1
PK-11 A + PK-13	1/5,1-1/2,8	4,8×7,2–2,7×4,0 12,2×18,3–6,8×10,2	50,8–37,2 129,1–94,5	1,9–3,5
PK-12 + PK-13	1/4,3–1/2,6	4,1×6,1–2,4×3,7 10,4×15,6–6,2×9,3	45,9–35,7 116,5–90,7	2,0-3,6
PK-11 A + PK-12 + PK-13	1/3,6–1/2,3	3,4×5,1–2,2×3,3 8,7×13,1–5,6×8,4	41,2–34,1 104,7–86,7	2,3-4,2

### Nikkor ED 300 mm f/4.5 IF

Extension Ring Anello di prolunga	Magnification Rapporto di riproduzione	Subject field Copertura di campo	Subject/film distance Distanza soggetto/ pellicola	Exposure factor Fattore di esposizione
-	1/∞−1/7,2	∞×∞-6,8×10,2 ∞×∞-17,2×25,8	∞–98,7 ∞–251	1,0
PK-11 A	1/37,5–1/5,9	35,4×53,1–5,5×8,3 89,9×135–14,1×21,1	468–85,7 1189–218	1,1
PK-12	1/21,4–1/5,2	20,2×30,3–4,9×7,3 51,4×77,1–12,4×18,6	279–78,8 708–200	1,2
PK-11 A + PK-12	1/13,6-1/4,5	12,9×19,3–4,2×6,3 32,7×49,0–10,7×16,1	187–71,9 476–183	1,4
PK-13	1/10,9–1/4,1	10,3×15,4–3,9×5,8 26,2×39,2–9,8×14,7	155–68,1 395–173	1,5
PK-11 A + PK-13	1/8,4–1/3,6	8,0×12,0-3,4×5,1 20,3×30,4-8,7×13,0	127–63,8 322–162	1,7
PK-12 + PK-13	1/7,2–1/3,3	6,8×10,2–3,2×4,7 17,3×26,0–8,0×12,0	113–61,2 286–155	1,8
PK-11 A + PK-12 + PK-13	1/6,1–1/3,0	5,7×8,6–2,9×4,3 14,5×21,8–7,3×10,9	99,1–58,33 252–148	2,0

### Data back MF-29

for Nikon F5

Order code Imprinted data

Data imprint Data display Usable film speed Power source Dimensions FRW536AA year/month/day, day/hour/ minute, month/day/year or day/month/year using six LED's on back using liquid crystals ISO 32–3200 one CR-2025 lithium battery  $150 \times 60 \times 29 \text{ mm}$ (W  $\times$  H  $\times$  D) 81 g (without batteries)



### Multi-control back MF-28

for	Nikon	F5
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Weight

Order code	FRW535AA in frame: 7-segment, 6-digit LED between frames: 5 × 7 dot
Imprinted data	matrix 22-digit LCD in frame: year/month/day, month/day/year, day/month/ year, day/hour/ minute, frame count, 6-digit sequence number (up to 999 999), 6-digit fixed number <b>between frames:</b> year/month/day/hour/minute/ second, year/month/day/hour/ up to 8 characters, month/ day/ hour/minute/up to 8 cha- racters, day/hour/minute/ second/up to 8 characters, cap- tion with up to 22 characters, frame count, shutter speed/ aperture, exposure range for auto exposure bracketing,
Timer function	year/ up to 18 characters up to 99 hours, 59 minutes and 59 seconds; up to 999 shot cycles for up to 999 shootings
Long exposure	from 1 to 999 sec, 1 to 999 min. or 1 to 999 hours with the camera set at "bulb"
Freeze focus	when focus mode set to man- ual, shutter is released when the subject enters in-focus position
Auto exposure	up to 9 continuous frames with
bracketing	a variety of exposures from 1/3 to 2 EV; compensation select- able between +8 and -8 EV
Speedlight	switches on automatically with timer function 30 sec. before exposure
Frame counter	appears continuously in LCD panel
Built-in quartz clock-hour clock	accuracy within ±60 sec per month (at 20°C/68°F); date and time automatically programmed
Power source Dimensions	two CR-2025 lithium batteries 156 $\times$ 78 $\times$ 32 mm
Weight	(W $\times$ H $\times$ D) 150 g (without batteries)



#### Data back MF-27 for Nikon F5

Order code

Imprinted data

Data imprint Data display Usable film speed Power source Dimensions

Weight

FRW534AA Day/month/year, month/day/ year, year/month/day or day/hour/minute using six LEDs on back using liquid crystals ISO 32-3200 one CR-2025 lithium battery 156 × 78 × 22 mm  $(W \times H \times D)$ 100 g (without batteries)



#### ... . .

Multi-control ba for Nikon F90 X	ick MF-26
Order code Data imprint	FRW533AA year/month/day, month/day/ year, day/month/year, day/hour/ minute; frame number, sequen- tial numbering, six figure num- ber of your choice, shutter speed and aperture; or no imprint
Built-in clock	24-hour clock with 24 time zones; daylight savings time option; automatic leap year adjustment
Timing accuracy Data imprint	± 30 sec. per month (at 20° C) six-figure, seven-segment LCD; imprint adjustment according to film sensitivity from ISO 32 to 3200
Interval timing	interval adjustment up to 99 hours, 59 min 59 secs
Long exposure	exposures up to 99 hours, 59 min, 59 secs
Auto-exposure sequence	press shutter release button continuously for 2 to 19 expo- sures
Exposure bracketing	for 3 to 19 exposures of diffe- rent shutter speeds bracketed from 1/3 to 2 EV; suitable for all exposure types including manual
Flash exposure bracketing Multiple- exposures Tripped focus	for 3 to 19 exposures with flash time bracketing from 1/3 to 2 EV; 2 to 19 exposures of the same frame are possible shutter is released automatical- ly as soon as object comes into focus
AE/AF memory	exposure and distance settings are put in memory
Custom reset	changing factory default set- tings for exposure, measuring system, film advance, AF range and flash
Flash output compensation Power source	correction from +1 to -3 EV, in 1/3 increments two 3 V lithium batteries type (CR-2025)
Dimensions	(CR-2025) 140 × 63 × 30 mm (W × H × D)
Weight	90 g (without batteries)



### Data back MF-25

for Nikon F90X

Order code Data imprint options	FRW532AA year/month/day, month/day/ year, day/month/year, day/hour/ minute or no imprint
Built-in clock	24-hour clock with 24 time zones; daylight savings time option; automatic leap year adjustment
Timing accuracy	$\pm$ 30 sec. per month (at 20° C);
Data imprint	six-figure, seven-segment LCD; imprint adjustment according to film sensitivity from ISO 32 to 3200
Alarm function	alarm option (hour/minute) for any desired time
Power source	two 3 V lithium batteries type CR-2025
Dimensions	$140.5 \times 63 \times 29 \text{ mm}$ (W × H × D)
Weight	80 g (without batteries)



## Data Back MF-18

for F3

Order code Application Possible data	FRW524AA F3 with MD-4 motor for imprinting between shots year, month, day or hours, minutes, seconds and reference numbers from 1 to 2000
Data imprinting	by means of six red LEDs
Data display on back	by means of liquid crystals
Power source	two 1.55 volt silver oxide
	batteries (SR 44/G13)
Dimensions	148.5 × 68.5 × 30.2 mm
	$(W \times H \times D)$
Weight	100 g (without batteries)



#### Data Back MF-14 for F3

Order code Possibile data

Data imprinting Data display on back Audible warning

Power source

Dimensions

Weight

from 1 to 2000 By means of sit red LEDs By LEDs Sounds for 20 sec at the time set Two 1.55 volt silver oxide

Year month, day or day, hour, minute or reference numbers

FRW520AA

batteries (SR 44/G13) 148.5 × 53.5 × 26 mm  $(W \times H \times D)$ 85 g (without batteries)

Accessory: Rear compartment for case CF-23 D

### Data Back MF-16

for FM-2

Order code Possible data	FRW522AA Year, month, day or day, hour, minute or reference numbers from 1 to 2000
Data imprinting	By means of six red LEDs
Data display on back	By means of liquid crystals
Audible warning	Sounds for 20 sec at the time
	set
Power source	Two 1.55 volt silver oxide
	batteries (SR 44/G13)
Dimensions	142.7 × 53.2 × 26.5 mm
	$(W \times H \times D)$
Weight	90 (without batteries)

Accessory: Rear compartment for case CF-27 D





#### F5 Ever-ready cases

Order code Use Model

Order code Use Model

Order code Use

Model

Order code Use

Model

Order code Use Model

CF53/FAE09601 to zoom 28-80 AF leather, black

CF54/FAE09701 to zoom 35-135 AF leather, black

CF53A/FXA10302 to zoom 28-70 AF front part only leather, black

CF54A/FXA10283 to zoom 70-210 AF front part only leather, black

CF53H/FXA10284 rear part only leather, black



#### F100 Ever-ready cases

Order code Use Model

CF57/FAE10201 to zoom 28-105 AF leather, black

Order code Use

Model

Order code Use Model

Order code Model

Order code Use

Model

Use

CF57A/FXA10302 to zoom 28-105 AF front part only leather, black

CF57H/FXA10304 rear part only leather, black

CF58/FAE10301 to zoom 70-300 AF leather, black

CF58A/FXA10303 to zoom 70-300 AF front part only leather, black



#### F90X Ever-ready cases

Order code Use Model	CF47/FAE08801 to zoom 28–80 AF leather, black
Order code Use	<b>CF47D</b> /FAE08901 to zoom 28–80 AF and data back
Model	leather, black
Order code Use	<b>CF47A</b> /FXA10250 to zoom 28–80 AF front part only
Model	leather, black



### F80 Ever-ready cases

for Nikon F80/F80D

Order code Use Model

Order code Use

Model

Order code Use Model

Order code Use Model

Order code Use Model **CF59**/FAE10401 to zoom 28-80 AF imitation leather, black

CF59A/FXA10308 to zoom 28-80 AF Front part only imitation leather, black

**CF59H**/FXA10308 rear part only imitation leather, black

CF60/FAE10501 to zoom 70-300 AF imitation leather, black

**CF60H**/FXA10309 rear part only imitation leather, black



### F65 Ever-ready cases

for Nikon F65/F65D

Order code Use Model **CF61**/FAE10601 to zoom 28–80 AF imitation leather, black



## F3 Ever-ready cases

for Nikon F3/F3HP/F3Ti

Order code Use

Model

Order code Use Model

Order code Use Fattura

Order code Use

Model

Order code Use

Model

CF22/FAE03302 wide-angle and standard lenses leather, bordeaux

CF21A/FAE04001 obiettivi all'zoom 35–70 front part only, leather, bordeaux

**CF22H**/FXA10140 rear part only leather, bordeaux

**CF100**/FXA10165 to zoom 35–70 and with motor MD-4 leather, bordeaux

CF23D/FAE04801 with data back MF-14 rear part only leather, bordeaux

CF27S/FAE10701



#### FM-3A Ever-ready cases

Order code Use Model

Order code Use

Model

Order code Use Model

Order code Use Model

Order code Use Model

Order code Use Model wide-angle and standard lenses imitation leather, black

CF27SA/FXA10320 wide-angle and standard lenses front part only imitation leather, black

**CF27SH**/FAEFXA10321 rear part only imitation leather, black

CF28SA/FXA10322 front part medium imitation leather, black

**CF29SA**/FXA10323 front part large imitation leather, black

**CF29SH**/FXA10324 rear part only with motor imitation leather, black



## Soft cases

for	Nikon	F3/F3	HP/FM-2

	-
Order code	CS7/FAE02601*
Use	FM-2 with lenses up to 70 mm
	length
Model	imitation leather, black
Order code	CS8/FAE02701*
Use	F3/FM-2 with lenses up to
	70 mm length
Model	imitation leather, black
Order code	CS9/FAE02801*
Use	F3/FM-2 with lenses up to
	90 mm length
Model	imitation leather, black
Order code	CS10/FAE02901*
Use	F3/FM-2 with lenses up to

165 mm length imitation leather, black

\*The case must be removed completely before shooting

Order code CS15/FAE04101 Use F3/FM-2 with lenses up to 70 mm length Model imitation leather, black



Order code Use Model

Model

CS13/FAE03201 with all lenses and all motors imitation leather, black





#### **Ever-ready cases**

#### to Nuvis V

Order code Model CSL24/FCE03501 nylon, black

#### to Nuvis S

Order code CSL20/FCE03101 Model nylon, black

#### to Nuvis S 2000

Order code Model CSL24/FCE03501 nylon, black

#### to Nuvis 300

Order code Model CSL22/FCE03301 nylon, black

### to Lite Touch Zoom 140 ED

Order code Model CSL23/FCE04301 nylon, black

### to Lite Touch Zoom 120 ED

Order code CSL23/FCE04301 Model nylon, black

# el nylon, black

### to One Touch Zoom 90

Order code Model CSL26/FCE03701 nylon, black

### to Lite Touch Zoom 70 W

Order code Model CSL25/FCE03601 nylon, black

### to Coolpix 5000

Order code Model CS5000/VAE10701 nylon, black

### to Coolpix 995

Order code Model CSL995/VAE10401 nylon, black

### to Coolpix 885

Order code Model CSL885/VAE10601 nylon, black

### to Coolpix 775

Order code Model CSL775/VAE10501 nylon, black







### Aluminium case WE-15

Order code Model

Dimensions

Weight



#### Neck strap AN-1

Order code Width Material FWE50101 10 mm/25 mm leather

#### Neck strap AN-4B

Order code Width Colour Material FWE50501 12 mm/25 mm black woven nylon fabric

### Neck strap AN-4Y

Order code Width Colour Material FWE50101 12 mm/25 mm yellow/black woven nylon fabric

#### Neck strap AN-6Y

 Order code
 FWE50101

 Width
 12 mm/50 mm

 Colour
 yellow/black

 Material
 woven nylon fabric

#### Neck strap AN-6W

 Order code
 FWE50702

 Width
 12 mm/50 mm

 Colour
 bordeau

 Material
 woven nylon fabric

#### Neck strap AN-5

Order code Width Colour Material 8H1J4003 12 mm/25 mm black, with Nikon script woven nylon fabric

#### Neck strap AN-7

Order code Width Colour Material FWE51401 12 mm/19 mm black, with Nikon script woven nylon fabric

#### Neck strap AN-11

for Nikon Pronea 600i (replacement)

Order code Width Colour Material FWE52201 20 mm gray with Nikon script woven nylon fabric















#### Camera handstrap AN-12

for compact cameras

#### Order code

FXA10263

#### Neck strap AN-13

for compact cameras

Order code Width Colour Material FWE513 7 mm black woven nylon fabric

### Neck strap AN-14

for Nikon F5 (replacement)

Order code Width Colour Material FWE52101 30mm black/bordeaux woven nylon fabric

### Neck strap AN-15

for Nikon Pronea S

FWE52101
30 mm
black/bordeaux
woven nylon fabric

### Neck strap AN-17

for Nikon F65

Order code	FWE52601
Width	30 mm
Colour	black/bordeaux
Material	woven nylon fabric

#### Neck strap ANWP with float

for binoculars 10 × 25 CF WP und 8 × 23 CF WP

Order code Width Colour Material 8P300357 50 mm gray with Nikon script woven nylon fabric

### Camera handstrap AH-4

for all Nikon cameras

Order code

FWE51801



#### Data-Link-IC-Card AC-2E

for SHARP<sup>®</sup> Electronic Organizer

Order code	FRW20601
Use	communication between
	SHARP <sup>®</sup> Electronic Organizer
	and Nikon F90X models
Function modes	On-Line mode:
	(with connection cord MC-27)
	camera operations
	customized settings
	memo-holder
	control of multifunction back
	MF-26
	Off-Line mode:
	using operation guide
	using photo hand-book





### Connecting cord MC-27

Order	code
Use	

FRG20801 communication between Electronic Organizers and the Nikon F90 models

#### **Photo Secretary**

for Nikon F5 and Personal Computer

Order code	Windows 95 <sup>®</sup> Software: AC1WE/FRW20702 Connecting cord: MC33/21301 Macintosh <sup>®</sup> Software: AC1ME/20802 Connecting cord: MC34/21401
Use	different functions of the Nikon F5 can be set by the Personal Computer, it's possible to down- load the memorised exposure details of the Nikon F5 to the PC to be changed and well finished

### **Connecting cord MC-33**

Order code	
Use	

FRG21301 communication between Nikon F5 and the Personal Computer

### Connecting cord MC-34

Order code Use FRG21401 communication between Nikon F5 and the Macintosh

Windows  $95^{\ensuremath{\circledast}}$  is a registered trademark of Microsoft Corporation in the USA.



Photo Secretary for Nikon F100 and Personal Computer

Order code	Windows 95 <sup>®</sup> Software:
	ACPWE /FRW21101
	Connecting cord:
	MC33/FRG2501
Use	Different functions of the Nikon
	F90X and F100 can be set by
	the Personal Computer; it's pos-
	sible to download the mem-
	orised exposure details of the
	Nikon F90X/F100 to the PC to
	be changed and well finished

Windows 95® is a registered trademark of Microsoft Corporation in the USA.

# Connecting cord MC-31 for AC-2WE

Order code Use

FRG21501



#### Cover for motor contact FA-71 for Nikon F3

Order code

6000088

### Camera body cover BF-1A

Order code Use FAD00301 with all Nikon SLR cameras

### Panorama head

 
 Order code
 FAW01201

 Use
 with lenses 28 mm up to 105 mm

 Caracteristics
 a spirit level is incorporated; snaps in at the choosed position of focal length

 Weight
 200 g

### Table tripod

Order code Use 8H5J1011 for cameras with tripod screw-thread

### Magnifier for slides LU8

Order code Magnification 8H1J6010 8×

### Magnifier for slides LU4

Order code Magnification 8P201302 4×

### Magnifier for slides Deluxe

Order code Magnification 8H5J1071 4×

### Acrylic Skirt black LU4B

Order code

8LU4B

### Acrylic Skirt transparent LU4T

Order code

8LU4T

### Cleaning set

Order code Consisting 8H1J6007 bellows, cleaning cloth and cleaning paper





#### Oldies and accessories

#### for D1

EH4 AC Adaptor MH16 Quick Charger EN4 Ni-MH Battery NKVW30 Nikon View DX NKCP 10 Nikon Capture Software SC D1 Cord Firewire, IEEE1394

#### for Coolpix 990

EH31 AC Adaptor CSE990 Case UCE1 USB Cord EGE900 Video cord SC EW3 Serial cord Windows SC EM3 Serial cord Mac ESE28 Slide copy adaptor LCE900 Lens cover SKE900 Flash bracket MCE41 Remote control

#### for Coolpix 880

EH21 AC Adaptor ENEL1 Rechargeable battery CSE880 Case EGE900 Video cord ESE28 Slide copy adaptor LCE880 Lens cover URE2 Step-up Ring

#### for Coolpix 950

EH31 AC Adaptor EGE900 Video cord SC EW2 Serial cord Windows SC EM2 Serial cord Mac ESE28 Slide copy adaptor SKE900 Flash bracket

#### for Scanner LS 30 IA20 Adaptor for film APS MA20 Adaptor for slide single SA20 Adaptor for film straps

for Scanner LS 2000 IA 20 Adaptor for film APS MA20 Adaptor for slide single SA20 Adaptor for film straps SF200 Auto slide feeder

#### for F4/F4S

FAW02601 Battery pack (4 batteries) MB20 FAW02701 High speed battery pack (6 batteries) MB21 FXA10220 MB21G grip portion of MB 21 FXA10221 MB21B grip bottom portion of MB 21 FXA10222 Battery holder MS21 FAW02801 External power regulator MB22 FAW03101 High speed battery pack MB23 FXA10232 Battery holder MS23 FAW03501 MN20 Rechargeable Ni-Cd-battery MB23 FAW03401 MH20 Quick charger for MN20 FAB02101 Action finder DA20 FAB02301 6×high-magnification finder DW21 FAB02201 Waist-level finder DW20 FXA10219 Cover for finder FE16 FRW529AA Multi-control back MF23 FRW528AA Data back MF22 FRW530AA Multi-control back MF24 for 250 frames FAW 03601 Battery pack DB6 to F4E FRG20901 Connecting cord MC28 DB6-F4E FSG02201 TTL cord SC24 FAC09001 Focusing screen B FAC09301 Focusing screen J FAC09101 Focusing screen C FAC09401 Focusing screen K FAC09201 Focusing screen E FAC09801 Focusing screen M FAC09701 Focusing screen F FAC09501 Focusing screen P FAC09901 Focusing screen G1

FAC09601 Focusing screen U FAC10001 Focusing screen G2 FAC10101 Focusing screen G3 FAC10201 Focusing screen G4 FAE07301 Ever-ready case CF41 for F4 (AF 35–70/3.3–4.5) FAE07401 Ever-ready case CF42 for F4 (AF 35–135/3.5–4.5) FXA10227 Ever-ready case CF41B rear part only for F4 FAE07501 Ever-ready case CF43 for F4S (AF 35–135/3.5–4.5) FAE08101 Soft case CS20 for F4 (AF 35–135/3.5–4.5) FAE08201 Soft case CS21 for F4E (standard lens)

#### for F801S

FRW52601 Data back MF21 FXA10216 Eyepiece cover DK8 FAC10401 Focusing screen B FAW02901 Anti-cold battery holder DB5 FAC10301 Focusing screen E FXA10217 Battery holder MS7

#### for F501/301

FXA10193 Eyepiece cover DK5 FAE063AA Ever-ready case CF35 (50/1.8) FAE065AA Ever-ready case CF36 (35–105/3.3–4.5) FAE06601 Front part only CF36A KA510-518 Correction lenses

#### for F2

FRW01301 MS2 battery holder to MB2 FWW00501 Cable release AR2 FPW21601 Double cable release AR4 FSW51501 Flash unit coupler AS1 with SB16B FSW51101 Flash unit coupler AS5 with SB17/16A FWW00401 Soft shutter release AR1

#### for FE2

FRA00602 Motor MD12 FAC03401 Focusing screen K2 FAC03501 Focusing screen B2 FAC03601 Focusing screen E2 FAE04901 Ever-ready case CF27 (50/1.8) FAE04001 Ever-ready case CF28 (35–70/3.5–4.5) FAE05201 Soft case CS7 FAE02601 Soft case CS9

#### for FM2

FAC03401 Focusing screen K2 FAC03501 Focusing screen B2 FAC03601 Focusing screen E2 FAF20302 DR3 Right-angle viewing attachment FAF20202 Eyepiece magnifier DG2 FAF50402 Eyepiece cover DK3

#### for FA

FRW522AA Data back MF16 FAC03601 Focusing screen E2 FAC03501 Focusing screen B2 FAC03401 Focusing screen K2

#### for FG/EM

FAE02601 Soft case CS7 FAE02801 Soft case CS9

#### for Pronea S

FAE10001 Ever ready case CS 27 to IX 30–60 mm FAE10101 Ever ready case CS 28 to IX 20–60/60–180 mm

#### for Pronea 600i

FAE09801 Ever ready case CF55 to IX 20–60/24–70 mm FXA10286 Front part only CF55A to IX 20–60/24–70 mm FXA10288 Rear part only CF55H FAE09901 Ever ready case CF56 to IX 60–180 mm FXA10287 Front part only CF56A to IX 60–180 mm

Nikonos RS lenses Nikonos RS obiettivi	
Nikonos V	
Nikonos V lenses/ Accessories Nikonos V obiettivi/ Accessori	
Nikonos Flashs/ Accessories Nikonos Lampeggiatori/ Accessori	
Accessories Nikonos Accessori Nikonos	

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# R-UW AF Fisheye-Nikkor 13 mm f/2.8 for underwater shots only

Order code	JEA504AA
Focal length	13 mm
Aperture ratio max.	1:2.8
Picture angle	170°
<b>Optical construction</b>	10 elements in 7 groups
Minimum distance	0.14 m
Reproduction ratio	1:5.22
Aperture range	2.8–22
Distance range	illuminated
Diving depth	100 m
Dimensions	126 mm $\varnothing$ × 94 mm
Weight	970 g

### Supplied with: Front lens cover Rear lens cover

### R-UW AF Nikkor 28 mm f/2.8

for underwater shots only

Order code	JEA501AA
Focal length	28 mm
Max. aperture ratio	1:2.8
Picture angle	59.8°
<b>Optical construction</b>	6 elements in 6 groups
Minimum distance	0.26 m
Reproduction ratio	1:6
Aperture range	2.8–22
Distance range	illuminated
Diving depth	100 m
Filter mount	88 mm $\varnothing  imes$ 1 mm
Dimensions	99 mm $\varnothing$ × 85 mm
Weight	550 g

Supplied with: Front lens cover UA-91 Rear lens cover LF-2

### R-UW AF Micro-Nikkor 50 mm f/2.8

for underwater shots only

Order code	JEA502AA
Focal length	50 mm
Max. aperture ratio	1:2.8
Picture angle	35°
<b>Optical construction</b>	10 elements in 9 groups
Minimum distance	0.167 m
Reproduction ratio	1:1
Aperture range	2.8–22
Distance range	illuminated
Diving depth	100 m
Filter mount	88 mm $\varnothing$ × 1 mm
Dimensions	103 mm × 126 mm
Weight	1100 g





Supplied with: Front lens cover UA-92 Rear lens cover LF-2

#### R-UW AF Zoom-Nikkor 20–35 mm f/2.8

for underwater shots only

Order code JEA503AA Focal length 20–35 mm Max. aperture ratio 1:2.8 79°–51° Picture angle Optical construction 10 elements in 10 groups Minimum distance 0.38 m **Reproduction ratio** 1:10 2.8–22 Aperture range illuminated Distance range Diving depth 100 m Filter mount 148 mm  $\varnothing \times 1$  mm 162 mm  $\varnothing$  × 129 mm Dimensions Weight 1750 g

Supplied with: Front lens cover UA-93 Rear lens cover LF-2

#### Front lens cover UA-900

for R-UW AF Nikkor 13 mm f/2.8

Order code JXA10082 Material synthetics

#### Front lens cover UA-91

for R-UW AF Nikkor 28 mm f/2.8

Order code	JXA10071
Material	synthetics

#### Front lens cover UA-92

for R-UW AF Micro-Nikkor 50 mm f/2.8

Order code JXA10072 Material synthetics

#### Front lens cover UA-93

for R-UW AF Zoom-Nikkor 20-35 mm f/2.8

Order code	JXA10073
Material	synthetics

#### **Rear lens cover LF-2A**

for all R-UW AF Nikkor lenses

Order code	
Material	

JED50201 synthetics









### Nikonos V

Order code	FEA040AA green
Type of camera	FEA040NA orange Electronically controlled under-
Type of camera	water and all-weather camera
	with focal plane shutter
Construction	Body made of cast aluminium
	alloy partially covered with rubber; hermetically sealed by
	packing rings
Depth	Can be used down to a depth
	of 50 m (6 kg/cm <sup>2</sup> )
Film	Standard 35 mm cartridge- type film
Picture format	$24 \text{ mm} \times 36 \text{ mm}$
Lens mount	Nikonos bayonet
Lenses	W Nikkor 35 mm f/2.5 as nor-
	mal lens; 4 alternative lenses from super wideangle to small
	telephoto
Viewfinder	Inverted Galilean Albada finder
	built into camera for use with
	standard 35 mm lens; film
	frame marks show about 85% picture coverage at infinity;
	0.55 × magnification; 0.9 diopter;
	exit pupil lying well back permits
	viewing with eye 40 mm away
	from finder; parallax correction marks provided; optical viewfinder
	or frame finders available as
	accessories for Nikonos lenses
Viewfinder display	LED shutter speed indicator;
	LEDs indicate overexposure and underexposure; lightning symbol
	as flash ready light
Shutter	Electronically controlled vertical-
ch	travel metal focal plane shutter
Shutter speeds	A (Auto): electronically con- trolled stepless speeds from
	1/30 sec. to 1/1000 sec.
	M (Manual): quartz-controlled
	speeds from 1/30 sec. to
	1/1000 sec. M90: mechanically controlled at
	1/90 sec.
	B: mechanically controlled for
	long exposures R: setting for rewinding film
Shutter release	On anatomically shaped grip;
	gentle pressure on button
	switches metering system on;
	meter remains on for 16 sec. after finger is removed; shutter
	release lock incorporated
Exposure control	Two modes: A (Auto) and M
	(Manual), in addition to M90
	(mechanically controlled at 1/90 sec.) and B for long exposures
Exposure metering	Through-the-lens (TTL) center-
	weighted metering with two
	silicon photodiodes (SPDs);
	one of the SPDs for TTL flash control with SB-102, SB-103
	and other units
Metering range	EV 8 to EV 19 at ASA/ISO 100
	(DIN 21) with f/2.8 lens (corre-
	sponding to 1/30 sec. at f/2.8 to 1/1000 sec. at f/22)
Film speed range	ASA/ISO 25 (DIN 15) to ASA/
	ISO 1600 (DIN 33)
Accessory shoe	Built into top of viewfinder







Flash synchronization	Flash X-synchronization only,
	via flash contact in camera
	base; synchronizes at 1/90 sec.
	or slower; Nikonos electronic
	flash unit SB-102 or SB-103 switches camera automatically
	to 1/90 sec. whenshutter speed
	selector dial is at «A» or at
	1/125 sec or higher; at 1/60 sec
	or slower, shutter fires at speed
	set
Flash ready light	Lightning symbol in viewfinder lights up when SB-102, SB-103
	or another flash unit has re-
	cycled; flashes to warn of insuf-
	ficient light output, incorrect
	setting of shutter speed selec-
	tor dial or film speed setting higher than ASA/ISO 400
	(DIN 27)
Film advance lever	Wound in single stroke or
	series of strokes; 144° winding
	angle; hinged for compactness;
	when shutter speed selector dial is at "A", shutter releases
	at about 1/1500 sec until film
	frame
Frame counter	Additive type; resets automati-
	cally when camera back is
Film rewind	opened Manually via film rewind crank
	after shutter speed selector dial
	has been set to «R»; shutter
	release button remains locked
Comore hade	during rewinding
Camera back	Hinged type, with camera back locking pin; opened and locked
	via camera back lock/release
	latch and camera back release
	button
Pressure plate	Hinged type, attached to camera body; locking catch
	provided
Tripod socket	Incorporated in camera base-
	plate; 1/4 inch thread (JIS)
Power source	One 3 V lithium battery (CR 1/3
	N) or two 1.55 V silver oxide batteries (SR-44/EPX 76)
Battery check	Possible when shutter speed
· · · · <b>,</b> · · · ·	selector dial is at any setting
	except M90, P or R, and frame
	counter is at or beyond «1»;
	when shutter release button is depressed, viewfinder display
	lights up to confirm sufficient
	battery power.
	When batteries are exhausted,
	1/90 sec + B is available as a
Dimensions	reserve period 146 × 99 × 58 mm
Sunctionio	$(W \times H \times D)$
Weight (body)	700 g
-	





#### UW-Nikkor 15 mm f/2.8

The lens is intended exclusively for underwater shots

Order code Focal length Maximum aperture Picture angle Optical construction Minimum distance Aperture scale Diaphragm type Depth of field display

Camera mount Filter thread Dimensions Weight JEA103AA 15 mm f/2.8 94° underwater 12 elements in 9 groups (including protective glass) 0.3 m f/2.8 to f/22 Manual Coupled with aperture setting for direct reading from distance scale Nikonos bayonet 87 mm 93 mm  $\varnothing$  × 90.6 mm 665 g



#### Viewfinder for UW-Nikkor 15 mm f/2.8

Order code Type Optical construction Magnification Field of view Parallax compensation Dimensions Weight FEB00701 Inverted Galilean telescope

3 elements in 3 groups 0.24× 90% Built-in parallax correction marks for 1.5 m, 0.6 m or 0.3 m 68 mm ∅ × 71 mm 280 q

#### Accessories:

Front lens cover (must be ordered) Rear lens cover (must be ordered)



### UW-Nikkor 20 mm f/2.8

The lens is intended exclusively for underwater shots

Order code Focal length Maximum aperture Picture angle Optical construction Minimum distance Aperture scale Diaphragm type Depth of field display

Camera mount Filter thread Dimensions Weight JEA105AA 20 mm f/2.8 78° underwater 9 elements in 7 groups 0.4 m f/2.8 to f/22 Manual Marked in yellow, orange and red for apertures f/4, f/5.6 and f/11 Nikonos bayonet 67 mm  $\oslash$ 70 mm  $\oslash$  × 74 mm 350 q



Accessories: Front lens cover Rear lens cover Optical underwater viewfinder DF-12

#### Viewfinder DF 12 for UW-Nikkor 20 mm f/2.8 and 28 mm f/3.5 (with mask)

Order code Use Type Optical construction Magnification Field of view Parallax display FEB00801 Only underwater Inverted Galilean telescope

Close-up parallax marks

Mounting

Dimensions Weight 3 elements in 3 groups 0.35 × 85% 20 mm: fixed setting at estimated distance 1.5 m 28 mm: fixed setting at estimated distance 2.0 m Provided 20 mm: focusing distance 40 cm 28 mm: focusing distance 40 cm With clamping screw in accessory shoe of camera 61.5 Ø mm x 71 mm (L × H)

160 g

JEA102AB



#### UW-Nikkor 28 mm f/3.5

The lens is intended exclusively for underwater shots

Order code
Focal length
Maximum aperture
Picture angle
Optical
construction
Minimum distance
Aperture scale
Diaphragm type
Depth of field
display

28 mm fr3.5 59° 6 elements in 5 groups (including protective glass plate) 0.6 m fr3.5 to fr22 Manual Coupled with aperture setting and read directly from distance scale Nikonos bayonet 58 mm  $\oslash$ 62 mm  $\oslash$  × 43.8 mm 175 q

Supplied with: Front lens cover

Camera mount

Filter thread

Dimensions

Weight

Rear lens cover

#### Accessories:

Protective ring Underwater action finder Optical underwater finder Hard leather case CL-50



#### W-Nikkor 35 mm f/2.5

JEA001AC

62° on land, 46°30' underwater 0.8 m

2.5-22

manual

scale

160 q

58 mm  $\emptyset$ 

Nikonos bayonet

62 mm Ø × 39,5 mm

6 elements in 4 groups (in-

cluding protective glass plate)

coupled with aperture setting

and read directly from distance

35 mm 1:2.5

Order code Focal length Max. aperture Optical construction Picture angle

Min. distance Aperture scale Diaphragm type Depth of field display

Camera mount Filter thread Dimensions Weight

Supplied with: Front lens cover UA-15 Rear lens cover UA-16

#### Accessories:

Lens hood with thread for 52 mm filter UA-5 Rubber lens hood (also lens protection) UA-9 Protective ring UA-19 Underwater action finder for 35 mm/80 mm W-Nikkor UA-11 Hard case imitation leather CL-50

IFA301AB

88 mm

1:4.0

#### W-Nikkor 80 mm f/4.0

Order code Focal length Max. aperture Optical construction Picture angle

Min. distance Aperture scale Diaphragm type Depth of field display

Camera mount Filter thread Dimensions Weight 4 lenses in 4 groups (plus protective glass plate)  $30^{\circ}20'$  on land,  $22^{\circ}45'$  underwater 1.0 m 4.0-22 manual coupled with aperture setting and read directly from distance scale Nikonos bayonet 58 mm  $\oslash$ 62 mm  $\oslash$  × 66 mm 275 g

Supplied with: Front lens cover UA-15 Rear lens cover UA-16

Accessories:

Lens hood with thread for 52 mm filter UA-5 Protective ring UA-19 Underwater action finder for 35 mm/80 mm W-Nikkor UA-11 Optical viewfinder (use only on land) DF-10 Hard case imitation leather CL-51

#### Optical viewfinder DF-10

for W-Nikkor 80 mm (Albada viewfinder)

Order code Use Parallax compensation Weight FEB00601 only above water the focusing ring on the finder shifts the bright frame 35 g







### Underwater action finder

for UW-Nikkor 28 mm

#### Order code Material

FEB00301 plastic

### Underwater action finder

for W-Nikkor 35 mm and 80 mm

Order code Material FEB00102 plastic

### Lens hood/filter adapter

for W-Nikkor 35 mm and 80 mm

Order code Filter thread Material JEB00101 52 mm  $\oslash$ plastic

Lens protector for W-Nikkor 35 mm, 80 mm and UW-Nikkor 28 mm

Order code Use Material JEW00301 protects the lens front from stones, etc. plastic

Hard case for W-Nikkor 35 mm and UW-Nikkor 28 mm

Order code Material JEE00102 imitation leather

Hard case for W-Nikkor 80 mm

. . .

Order code Material JEE00202 imitation leather

Front lens cover for W-Nikkor 35 mm, 80 mm and UW-Nikkor 28 mm

Order code Material JED00101 plastic

Rear lens cover for W-Nikkor 35 mm, 80 mm and UW-Nikkor 28 mm

Order code Material JED50101 plastic

















### Electronic flash unit SB-104

for Nikonos RS AF

Order code Electronic construction

Flash functions

Camera/flash functions

Guide number

Angle of coverage Number of flashes Recycle time Color temperature Power source

Dimensions Weight

Supplied with:

SK-104 bracket set: SK-104A arm SK-104B bracket TTL sync cord O-ring set

#### Accessories:

Battery pack SN-104 Quick charger SH-104 Extension arm SK-104E Double bracket SK-104W Arm for SB-103/SK-104C Double TTL sync cord for SC-100 TTL sync cord for SB-103/104/SC 101

FSA706AA automatic insulated gate construction, bipolar transistor and series circuitry TTL flash manual flash: full power 1/4, 1/6 sync cord activation camera and flash activation by means of photocell with second flash unit activation of second flash unit by means of photocell signal flash test flash matrix-controlled TTL fill-flash center-weighted TTL flash synchronization on rear curtain 32 above water 16 below water (ISO 100) 100° approx. 120 approx. 3 sec. approx. 4700 K rechargeable NiCd battery pack; recharged in approx. 2 hours with quick charger SH-104  $124 \text{ mm} \varnothing \times 222 \text{ mm}$ 2500 g above water 1000 g below water



### Electronic flash unit SB-105

for Nikonos RS AF and Nikonos V

Order code Electronic construction	FSA707AB high-performance silicon- controlled rectifier and series	
Maximum depth Settings	circuitry 100 m (12 kg/cm <sup>2</sup> ) Flash functions: TTL flash manual flash: full power, 1/4, 1/16 sync cord activation wireless activation by means of built-in photocell signal flash test flash Camera/flash functions: matrix-controlled TTL fill-	
	flash (on Nikonos RS) center-weighted TTL flash synchronization on rear	
Angle of coverage	curtain (on Nikonos RS) 103° × 84° above water; suffi- cient for 15 mm lens using wide-angle diffuser SW-103	
Guide number	22 above water,	
Number of flashes	11 below water (full output) approx. 45 with NiCd batteries (depending on battery unit and charge): approx. 120 with alka-	
Recycle time	line-manganese batteries approx. 4 sec. with NiCd batte- ries (depending on battery unit and charge); approx. 6 sec. with alkaline-manganese bat- teries	
Power source	four penlight LR6/AM3 alkaline- manganese batteries or NiCd batteries; high-power manga- nese or lithium batteries are not recommended	
Dimensions	flash head: approx. 99 $\times$ 130	
Weight	×181 mm (H × W × D) approx. 780 g above water approx. 330 g below water flash unit with arm, bracket, joint and sync cord: approx. 1730 g above water	

#### Supplied with:

Arm SK-104A Bracket Sync cord Joint Cord fastening hanger Wide-angle diffuser SW-103 Set of O-rings Exposure calculation table Battery holder MS-105 Calculation card UA-84

#### Accessories:

Bracket SK-104B Extension arm SK-104C Double bracket SK-104W Double flash bracket UA74 Double sync cord SC-100 Arm for SB-102/103/105 Joint for SB-102



#### Flash bracket set SK-104

for Nikonos flash unit SB-104

Order code Use Supplied with FSW72001 with Nikonos RS and Nikonos V flash bracket SK-104B, flash arm SK-104A

### Flash bracket SK-104B

for Nikonos flash unit SB-104/SB-105

Order code Use

FXA10245 with flash arm SK-104A/ SK-104C

#### Flash arm SK-104A

for Nikonos flash unit SB-104

Order code FXA10244 flash bracket SK-104B and Use double flash bracket SK-104W

### Double flash bracket SK-104W

for Nikonos flash unit SB-104/SB-105

Order code	FSW72301
Use	with flash arm SK-104A/
	SK-104C
Function	allows two flash units to be used simultaneously

### Flash arm SK-104C

for Nikonos flash unit SB-105

Order code	FSW72401
Use	with flash bracket SK-104B and
	double flash bracket SK-104W

#### Extension arm SK-104E

for Nikonos flash unit SB-104

Order code Use Function

FSW72201 with flash arm SK-104A improves flexibility and increases reach

### Double flash bracket UA-74

for Nikonos flash unit SB-105

Order code	FXA10183
Use	with Nikonos flash unit SB-105
Function	allows simultaneous use of
	two flash units

### Extension arm UA-76

for Nikonos flash unit SB-105

Order code	FSW71001
Use	with flash arm of Nikonos flash
	unit SB-105
Function	improves flexibility and
	increases reach



### Battery pack SN-104

for Nikonos flash unit SB-104

Order code Flash output

Dimensions Weight FSW71501 approx. 120 flashes with each charge (at full output) 100 mm  $\oslash \times$  51 mm 370 g (without case)

#### Quick charger SH-104

for battery pack SN-104

Order code Recharging	FSW71801 approx. two hours for one bat- tery pack or four hours for two battery packs; overcharging not possible; charge control lamp
Power input	100–240 V alternate current, 50/60 Hz, 0,29–0,16 A
Power output Dimensions Weight	10,5  V / 1,25  A $80 \times 52 \times 200 \text{ mm}$ 600  g

#### Exposure disks UA-82

for Nikonos flash unit SB-104 (replacement)

Order code	FXA10246
Function	gives exposures for different film types; attaches to back of flash unit

#### **Calculation table UA-84**

for Nikonos flash unit SB-105 (replacement)

Order code FXA10274

#### TTL sync cord UA-78

for Nikonos flash unit SB-104/SB-105

 Order code
 FXA10177

 Use
 with Nikonos RS and Nikonos V

 Length
 1.5 m

#### Double TTL sync cord SC-100

for Nikonos flash unit SB-104/SB-105

Order code Use	FSG70102 with Nikonos RS and Nikonos V and all R-UW lenses
Function	allows two flash units to be used simultaneously
Length	1.5 m each

#### TTL sync cord SC-101

for Nikonos flash unit SB-104/SB-105

Order code Use Function	FSG70301 with Nikonos RS and Nikonos V and connecting cord SC-103 allows flash units to be changed underwater TTL only underwater
Length	1.5 m



#### Double TTL sync cord SC-102

for Nikonos flash unit SB-104/SB-105

Connecting cord SC-103 for Nikonos flash unit SB-104/SB-105

FSG70501

SC-102

0.3 m

- Order code Use
- Function

Length

Order code

Function

Length

Power source

Use

#### FSG70401 with Nikonos RS and Nikonos V and connecting cord SC-103 allows two flash units to be used simultaneously as well as flash units to be changed underwater, TTL only underwater 1.5 m each

with Nikonos RS and Nikonos V and TTL sync cord SC-101 as well as double TTL sync cord

allows flash units to be changed underwater integrated 5.8 V lithium bat-

tery, sufficient for approx. 20,000 flashes; battery charges by Nikon Customer Service





#### Sync cord set UA-95

for Nikonos flash unit SB-104/SB-105

Order code	FSG705AA
Use	with Nikonos RS and Nikonos V
Supplied with	TTL sync cable SC-101,
	connecting cord SC-103

Sync cord set UA-96 for Nikonos flash unit SB-104/SB-105

Order code	FSG705AB
Use	with Nikonos RS and Nikonos V
Supplied with	double TTL sync cable SC-102,
	connecting cord SC-103

#### TTL cord UA-72

for Nikonos V (for use above water only)

Order code Use	FSG70201 with all flash units with ISO-
Function	flash mount allows conventional flash units to be used in TTL setting
Length	0.6 m

#### Flash adapter UA-62

for Nikonos V (for use above water only)

Order code FSW70401 Use with all shutter-activated flash units Function allows conventional flash units to be used







### Case SS-101

for Nikonos flash unit SB-103 (replacement)

Order code Use

Material

FSE00601 space for complete flash unit with camera; inside side pockets for films, O-rings, etc. nylon; beige with brown and black decorative stripes

### O-Ring Set

for flash unit SB-104 (replacement)

Order code FSW72101

O-Ring Set

for flash unit SB-103 (replacement)

Order code

FSW71401





# Close-up outfit for Nikonos III, IV-A and V

Order code Consisting of Optical	<ul> <li>FPF701AB</li> <li>A Close-up attachment lens (can be mounted and re- moved underwater)</li> <li>B 3 field frames for 28 mm, 35 mm and 80 mm lenses</li> <li>C Frame support bracket for precise camera-to-subject distance</li> <li>D Holder for close-up attach- ment lens Carrying case for close-up outfit and camera</li> </ul>
construction	2 elements in 2 groups
Shooting distance	235 mm from front lens to field
Shooting distance	frame
Distance cotting	
Distance setting	At infinity on the lens With Nikonos IVA and V:
Exposure	
	automatic
	With SB-101:1/4 output dia-
	phragm 16/22 with ASA 100/
	DIN 21 film, TTL mode with
	Nikonos V with SB-102 or
	SB-103
Weight	570 g (with 28 mm field frame)
Magnifications	28 mm underwater
	$144 \text{ mm} \times 216 \text{ mm} = 1/6$
	35 mm on land*
	155 mm × 233 mm = 1/6.5
	underwater
	$109 \text{ mm} \times 164 \text{ mm} = 1/4.5$
	80 mm on land**
	71 mm × 106 mm = 1/3
	underwater
	$53 \text{ mm} \times 79 \text{ mm} = 1/2.2$
	* with 28 mm field frame
	**with 35 mm field frame

### Case for Close-up Outfit\*

Order code	FPE70102 (spare)
Colour	Beige with brown and black
	decorative stripes
Material	Nylon
Design	Space for complete close-up outfit with camera

\*These two cases are supplied with the flash unit and the close-up outfit.


# Depth of field Table for Nikonos Close-up Outfit Profondità di campo per obiettivi Nikonos con complesso macro

Lens	Use Impiego	Aperture/Apertura						
Obiettivo		open/aperto	f/4	f/5.6	f/8	f/11	f/16	f/22
28 mm f/3.5	Underwater sotto acqua	+ 6,3 mm – 5,9 mm	+ 7,2 mm – 6,7 mm	+ 10,2 mm - 9,3 mm	+ 14,8 mm – 13,2 mm	+ 21,5 mm – 17,8 mm	+ 31,3 mm – 25,1 mm	+ 45,1 mm – 33,3 mm
35 mm f/2.5	on land su terre	+ 3,7 mm – 3,6 mm	+ 6,0 mm – 5,6 mm	+ 8,5 mm – 7,8 mm	+ 12,3 mm 11,1 mm	+ 17,3 mm – 14,9 mm	+ 26,1 mm – 21,1 mm	+ 37,4 mm – 27,8 mm
	Underwater sotto acqua	+ 2,8 mm – 2,7 mm	+ 4,5 mm – 4,2 mm	+ 6,4 mm – 5,9 mm	+ 9,2 mm – 8,4 mm	+ 12,8 mm – 11,4 mm	+ 19,1 mm – 16,2 mm	+ 27,0 mm – 21,7 mm
80 mm	on land su terre		+ 1,3 mm – 1,1 mm	+ 1,8 mm - 1,5 mm	+ 2,5 mm – 2,2 mm	+ 3,4 mm - 3,1 mm	+ 5,0 mm - 4,5 mm	+ 6,9 mm – 6,2 mm
f/4	Underwater sotto acqua		+ 1,0 mm – 0,8 mm	+ 1,3 mm - 1,2 mm	+ 1,9 mm - 1,7 mm	+ 2,6 mm – 2,3 mm	+ 3,7 mm - 3,4 mm	+ 5,1 mm – 4,7 mm

+ Denotes depth of field in front of the field frame (in the direction of the camera)

- Denotes depth of field behind the field frame

+ Significa che la profondità di campo è davanti al delimitatore d'inquadratura

(verso il corpo macchina)

- significa che la profondità di campo è dietro al delimitatore d'inquadratura

#### Compartment case CTN1

for Nikonos RS

Order code Use

Material

FEE50001 with Nikonos RS, three R-UW AF lenses, flash unit SB-104 with basic equipment robust synthetics, red

### Camera case UA-60

for Nikonos V

Order code Material

FEE00401 nylon; beige with brown and black stripes

Neck strap UA-83 for Nikonos RS (replacement)

FWE51901 Order code

Neck strap UA-65 for Nikonos V (replacement)

Order code

FWE51801

#### Remote control cord MC-100 for Nikonos RS

Order code Length

FRG30101 3 m

# Body cover UA-90

for Nikonos RS

Order code Material Attention

FXA10243 synthetics is not waterproof, serves only as a protection against dust

O-Ring Set UA-80 for Nikonos RS

Order code

O-Ring Set UA-70 for Nikonos V

Order code

FEW00501

FEW00601











Compact type Modelli compatti	Various Vari
Standard type Modelli standard	
Action type Modelli sportivi	
Top type Modelli top	
Zoom type Modelli zoom	
Monoculars Monoculari	

# **NIKON BINOCULARS**



#### How do I buy a pair of binoculars?

The large number of commercially available binoculars does not make it particularly easy to decide on a certain make or a certain type, and this is made all the more difficult by the fact that binoculars appear very similar. The customer will be offered expensive and cheap, good and poor, high-magnification and low-magnification binoculars. He can choose between conventional designs and modern roof prism binoculars. And finally, he will also be asked whether he requires binoculars with high relative brightness and a particularly wide angular field of view.

The most important criterion in choosing any pair of binoculars is without a doubt the optical and mechanical quality. Inferno optics, poorly adjusted prisms and an absent or inadequate lens coating result in rapid eye fatigue, lack of focus colour fringes and optical distortion. Poor mechanical construction shortens the life of a pair of binoculars and can make it inconvenient to use. Although the price and name of a product are not always a reliable yardstick, it is indeed true to say that very cheap and unfamiliar binoculars generally have poorer characteristics than the more expensive proprietary brands, whose design has entailed considerable outlay.

But how do we find out whether a pair of binoculars is good or poor? There are a few simple tests which quickly provide information about the quality. If you hold the binoculars about 40 to 50 cm away from the eye and look through the eyepiece, you should see a circular, bright point which has sharp contours and a larger or smaller diameter depending on the relative brightness of the objective. This is the sign of high optical quality. In this test, binoculars of poorer quality show darkened, ill defined edges which are angular in some cases. To carry out another test, hold the binoculars exactly horizontal, about 10 to 20 cm away from the eye. Close alternate eyes and keep repeating this procedure. If the image moves up and down, this is an indication of poor adjustment of the prisms. Now look through the binoculars in the normal way and assess the image. It should be bright, have high contrast, be sharp from edge to edge and have no barrel-like distortions. Take this opportunity to test the mechanical system of the binoculars too. The focusing knobs should be convenient to turn, but not too easy or too difficult: either of these situations would simply make focusing more difficult. The bridge must fold easily and be capable of adaptation to the eye spacing but must not be so loose as to make it impossible to hold the binoculars with one hand. To allow an optimum comparison of the optical performance of different binoculars, each pair of binoculars must first be correctly adjusted, i.e. to the acuity of your eyes. To do this, point the binoculars at a well illuminated subject. Close your right eye and focus on with the left eye by turning the focusing wheel on the central adjustment. Now close your left eye and focus by turning the diopter compensation ring on the right-hand eyepiece. It is now possible to make an exact assessment of the optical quality.

#### Choosing the type of binoculars

One pair of binoculars is not the same as another. A theatregoer requires a different pair of binoculars to the traveller. A hunter of higher game, who has to make observations over long distances, will need a different type of binoculars to the hunter of game of chase, who is dependent on good vision at dusk too. Important criteria in making a choice are the magnification factor, relative brightness and twilight output and the angular field of view of the binoculars. The numbers engraved on every pair of binoculars - e.g.  $6 \times 20, 7 \times 30, 10 \times 70$ , etc. – indicate the magnification and the diameter of the objective. For example,  $8 \times 30$ binoculars have 8  $\times$  magnification and an objective diameter of 30 mm. It is not true that particularly highmagnification binoculars are always the correct choice. Apart from the fact that they require a very steady hand, they also give a relatively small field of view at close distances. On journeys and at sports meetings, where the need is for an overall view, medium-magnification or even low-magnification binoculars  $(6 \times -8 \times)$ are generally more suitable. High magnification is higher game.

The relative brightness and twilight output provide information about the suitability of the binoculars in poor light conditions and particularly at twilight. The larger the objective diameter in relation to the magnification factor, the greater the relative brightness of a pair of binoculars and the higher its twilight output. In binoculars of this type, the field of view is particularly bright; thus, these binoculars still give a very good view even when twilight sets in. The relative brightness can be determined in a simple manner by dividing the objective diameter by the magnification factor and squaring the result. The twilight output is obtained by multiplying the magnification factor by the objective diameter and taking the square root of the result.

In contrast to the relative brightness and twilight output, the angular field of view of a pair of binoculars cannot be calculated directly; however, it is usually stated under the technical data for the binoculars. The larger the angular field of view, the easier it is to cover a subject. Particularly at sports meetings, it is advantageous to have a large field of view since this makes it easy and quick to "catch" a fast-running athlete. Binoculars with a small field of view make "scanning" inevitable.

The decision in favour of modern, compact roof prism binoculars or in favour of conventional binoculars is based not only on the quality but on personal preference. The new roof prism binoculars from Nikon make a particularly great impression through their low weight and compactness and outstanding image quality. The extraordinary streamlined form is not only functional but aesthetically pleasing. The eyepieces have been equipped with special rubber eyecups which ensure a good view for those who wear spectacles and prevent damage to the spectacles.

#### Specifications

D	(Dach)	a slim structure thanks to the use of triangular rigid prisms
CF	(Central Focusing)	precision focusing by means of the central adjustment device
IF	(Individual Focusing)	precision focusing with simultaneous adjustment of the single left- and right-eye dioptres
HP	(High Eyepoint)	wide-angle eyepiece wich allows comfortable viewing, even for those people who wear glasses
F	(Folding)	collapsible
WP	(Waterproof)	water-tight

# Binocular 7 × 21 CF Sprint III

(only green)

Order code Magnification Objective diameter Angular field of view	BAA564AA 7× 21 mm
Real	6.7°
Apparent	46.9°
Field of view at 1000 n	<b>n</b> 117 m
Exit pupil	3.0 mm
Relative brightness	9.0
Eye relief	12.5 mm
Close focusing	
distance	3.0 m
Weight	240 g
Dimensions	95 × 117 mm (L × W)
Туре	Porro

# Binocular 8 × 21 CF Sprint III

Order code	BAA565AA green
	BAA568AA silver
Magnification	8×
Objective diameter	21 mm
Angular field of view	
Real	6.3°
Apparent	50.4°
Field of view at 1000 m	110 m
Exit pupil	2.6 mm
Relative brightness	6.8
Eye relief	11.3 mm
Close focusing	
distance	3 m
Weight	240 g
Dimensions	93 × 117 mm (L × W)
Туре	Porro

# Binocular 9 $\times$ 21 CF Sprint III

(only green)

Real

Туре

Order code BAA566AA Magnification 9× Objective diameter 21 mm Angular field of view 5.6° Apparent 50.4° Field of view at 1000 m 98 m Exit pupil 2.3 mm **Relative brightness** 5.3 Eye relief 9.7 mm Close focusing distance 3 m 235 g Weight Dimensions 89 × 117 mm (L × W) Porro

# Binocular 10 $\times$ 21 CF Sprint III

Order code	BAA567AA green BAA596AA silver
	5, 0 155 0, 0 1 511 0
Magnification	10×
Objective diameter	21
Angular field of view	
Real	5°
Apparent	50°
Field of view at 1000 m	<b>1</b> 87 m
Exit pupil	2.1
Relative brightness	4.4
Eye relief	8.6 mm
Close focusing	
distance	3.0 m
Weight	235 g
Dimensions	87 × 117 mm (L × W)
Туре	Porro









# Binocular 8 $\times$ 25 CF Travelite V

Order code	BAA383AA
Magnification	8×
Objective diameter	25 mm
Angular field of view	
Real	5.6°
Apparent	44.8°
Field of view at 1000 m	<b>1</b> 98 m
Exit pupil	3.1
Relative brightness	9.6
Eye relief	14 mm
Close focusing	
distance	3.0 m
Weight	255 g
Dimensions	115 × 118 mm (L × W)
Туре	Porro

# Binocular 9 $\times$ 25 CF Travelite V

Order code	BAA384AA
Magnification	9×
Objective diameter	25 mm
Angular field of view	
Real	5.6°
Apparent	50°
Field of view at 1000 m	<b>1</b> 98 m
Exit pupil	2.8 mm
Relative brightness	7.8
Eye relief	12.2 mm
Close focusing	
distance	3 m
Weight	255 g
Dimensions	113 × 118 mm (L × W)
Туре	Porro

# Binocular 10 $\times$ 25 CF Travelite V

Order code	BAA385AA
Magnification	10×
Objective diameter	25 mm
Angular field of view	
Real	5°
Apparent	50°
Field of view at 1000 m	<b>1</b> 87 m
Exit pupil	2.5 mm
Relative brightness	6.3
Eye relief	11.1 mm
Close focusing	
distance	3 m
Weight	250 g
Dimensions	110 × 118 mm (L × W)
Туре	Porro

# Binocular 12 imes 25 CF Travelite V

Order code	BAA368AA
Magnification	12×
Objective diameter	25 mm
Angular field of view	
Real	4.2°
Apparent	50.4°
Field of view at 1000 m	1 73 m
Exit pupil	2.1 mm
Relative brightness	4.4
Eye relief	11.1 mm
Close focusing	
distance	4 m
Weight	260 g
Dimensions	110 × 118 mm (L × W)
Туре	Porro









# Binocular 8 $\times$ 25 CF DX II

Order code Magnification	BAA582AA 8×
Objective diameter	25 mm
Angular field of view	
Real	5.6°
Apparent	44.8°
Field of view at 1000 m	98 m
Exit pupil	3.1
Relative brightness	9.6
Eye relief	14 mm
Close focusing	
distance	2 m
Weight	305 g
Dimensions	107 × 113 mm (L × W)
Туре	Porro

# Binocular 10 $\times$ 25 CF DX II

Order code	BAA583AA
Magnification	10×
Objective diameter	25 mm
Angular field of view	
Real	5°
Apparent	50°
Field of view at 1000 m	<b>1</b> 87 m
Exit pupil	2.5 mm
Relative brightness	6.2
Eye relief	11.1 mm
Close focusing	
distance	2 m
Weight	305 g
Dimensions	105 × 113 mm (L × W)
Туре	Porro

# Binocular 12 imes 25 CF DX II

Order code	BAA584AA
Magnification	12×
Objective diameter	25 mm
Angular field of view	
Real	4.2°
Apparent	50°
Field of view at 1000 m	73 m
Exit pupil	2.1 mm
Relative brightness	4.4
Eye relief	11.1 mm
Close focusing	
distance	3 m
Weight	310 g
Dimensions	$105 \times 113 \text{ mm} (L \times W)$
Туре	Porro







# Binocular 8 $\times$ 36 DCF Sporter I

Order code	BAA595AA
Magnification	8×
Lens diameter	36 mm
Angular field of view	
Real	7°
Apparent	56°
Field of view at 1000 m	122 m
Exit pupil	4.5 mm
Relative brightness	20.3
Eye relief	20.5 mm
Close focusing	
distance	3 m
Weight	720 g
Dimensions	145 × 131 mm (L × W)
Туре	Roof



# Binocular 10 $\times$ 36 DCF Sporter I

Order code Magnification	BAA595AA 10×
Lens diameter	36 mm
Angular field of view	50 11111
Real	5.6°
Apparent	56°
Field of view at 1000 m	<b>1</b> 98 m
Exit pupil	3.6 mm
Relative brightness	13
Eye relief	16.1 mm
Close focusing	
distance	3 m
Weight	700 g
Dimensions	140 × 131 mm (L × W)
Туре	Roof

#### Binocular 8 × 25 CF WP/RA II

Order code	BAA132AA
Magnification	8×
Objective diameter	25 mm
Angular field of view	
Real	6.3°
Apparent	50.4°
Field of view at 1000 m	110 m
Exit pupil	3.1 mm
Relative brightness	9.6
Eye relief	14.3 mm
Close focusing	
distance	5 m
Weight	450 g
Dimensions	108 × 119 mm (L × W)
Characteristics	Rubber armouring; waterproof;
	fog-free with O-ring seal and
	nitrogen gas

Туре

# Binocular 10 × 25 CF WP/RA II

Porro

Order code	BAA133AA
Magnification	10×
Objective diameter	25 mm
Angular field of view	
Real	5°
Apparent	50°
Field of view at 1000 m	<b>1</b> 87 m
Exit pupil	2.5 mm
Relative brightness	6.3
Eye relief	13.1 mm
Close focusing	
distance	5 m
Weight	450 g
Dimensions	104 × 119 mm (L × W)
Characteristics	Rubber armouring; waterproof;
	fog-free with O-ring seal and
	nitrogen gas
Туре	Porro

#### Binocular 8 × 25 DCF Sportstar III

Order code BA589AA silver BAA587AA black Magnification 8× **Objective diameter** 20 mm Angular field of view Real 6.3° Apparent 50.4° Field of view at 1000 m 109 m Exit pupil 2.5 mm **Relative brightness** 6.3 Eye relief 10.1 mm **Close focusing** distance 3 m 245 g Weight Dimensions 102 × 107 mm (L × W) Roof Туре

# Binocular 10 × 25 DCF Sportstar III

Order code	BAA590AA silver
	BAA588AA black
Magnification	10×
Objective diameter	25 mm
Angular field of view	I
Real	5°
Apparent	50°
Field of view at 1000 m	1 87 m
Exit pupil	2.5 mm
Relative brightness	6.3
Eye relief	10.1 mm
Close focusing	
distance	3 m
Weight	310 g
Dimensions	121 × 109 mm (L × W)
Туре	Roof









#### Binocular 7 × 35 CF Action VI

Order code BAA600AA Magnification 7× **Objectiv diameter** 35 mm Angular field of view Real 9.3° 65.1° Apparent Field of view at 1000 m 163 m Exit pupil 5 mm **Relative brightness** 25 Eye relif 11.9 mm Close focusing Distance 5.1 m Weight 675 g Dimensions 123 × 181 mm (L × W) Туре Porro asferical lens in an ocular Characteristic

# Nien Contraction of the second second





Order code Magnification	BAA602AA 7×
Objectiv diameter	50 mm
Angular field of view	
Real	6.4°
Apparent	44.8°
Field of view	
at 1000 m	112 m
Exit pupil	7.1 mm
Relative brightness	50.4
Eye relif	20 mm
Close focusing	
Distance	8.4 m
Weight	1005 g
Dimensions	206 × 194 mm (L × W)
Туре	Porro
Characteristic	asferical lens in an ocular

#### Binocular 8 $\times$ 40 CF Action VI

Order code	BAA601AA
Magnification	8×
Objectiv diameter	40 mm
Angular field of view	
Real	8.2°
Apparent	65.6°
Field of view	
at 1000 m	146 m
Exit pupil	5 mm
Relative brightness	25
Eye relif	11.9 mm
Close focusing	
Distance	5.1 m
Weight	745 g
Dimensions	143 × 186 mm (L × W)
Туре	Porro
Characteristic	asferical lens in an ocular



#### Binocular 10 × 50 CF Action VI

Order code Magnification **Objectiv diameter** Angular field of view 6.5° Real Apparent Field of view at 1000 m Exit pupil **Relative brightness** Eye relif Close focusing Distance Weight Dimensions Type Characteristic

BAA603AA 10× 35 mm

65° 114 m 5 mm 25 11.8 mm 6.4 m 985 g 187 × 194 mm (L × W) Porro asferical lens in an ocular

#### Binocular 12 $\times$ 50 CF Action VI

BAA604AA Order code Magnification 12× Objectiv diameter 50 mm Angular field of view 5.5° Real Apparent 66° Field of view at 1000 m 96 m Exit pupil 4.2 mm **Relative brightness** 17.6 Eye relif 9.4 mm Close focusing Distance 6.7 m 975 g Weight Dimensions 180 × 194 mm (L × W) Туре Porro Characteristic asferical lens in an ocular

# Adaptor for tripod to Action series

Order code

BAB90005



# Binocular 8 $\times$ 30 E II

Order code Magnification Objective diameter Angular field of view	BAA055AA 8× 30 mm
Real	8.8°
Apparent	70°
Field of view at 1000 m	<b>1</b> 54 m
Exit pupil	3.8 mm
Relative brightness	14.4
Eye relief	13.8 mm
Close focusing	
distance	3 m
Weight	575 g
Dimensions	101 × 181 mm (L × W)
Туре	Porro



Order code	BAA0056AA
Magnification	10×
Objective diameter	35 mm
Angular field of view	
Real	7°
Apparent	70°
Field of view at 1000 m	<b>1</b> 122 m
Exit pupil	3.5 mm
Relative brightness	12.3
Eye relief	13.8 mm
Close focusing	
distance	5 m
Weight	625 g
Dimensions	126 × 183 mm (L × W)
Туре	Porro

# Binocular 7 $\times$ 50 CF WP Compass

Order code	BAA575AA
Magnification	7×
Objective diameter	50 mm
Angular field of view	
Real	7.2°
Apparent	50.4°
Field of view at 1000 m	<b>1</b> 126 m
Exit pupil	7.1 mm
Relative brightness	50.4
Eye relief	22.7 mm
Close focusing	
distance	10 m
Weight	1120 g
Dimensions	193 × 202 mm (L × W)
Characteristics	Built-in compass with illumin-
	ator; rubber armouring; water-
	proof; fog-free with O-ring
	seal and nitrogen gas
Туре	Porro
Accessories	Floating strap



# Binocular 7 $\times$ 50 CF WP

Order code	BAA574AA
Magnification	7×
Objective diameter	50 mm
Angular field of view	1
Real	7.2°
Apparent	50.4°
Field of view at 1000 m	126 m
Exit pupil	7.1 mm
Relative brightness	50.4
Eye relief	22.7 mm
Close focusing	
distance	10 m
Weight	1100 g
Dimensions	193 × 202 mm (L × W)
Characteristics	Rubber armouring; waterproof;
	fog-free with O-ring seal and
	nitrogen gas
Туре	Porro
Accessories	Floating strap



# Binocular 7 $\times$ 50 IF WP

Order code BAA577AA Magnification 7× Objective diameter 50 mm Angular field of view	
Real 7.5°	
Apparent 52.5°	
Field of view at 1000 m 131 m	
Exit pupil 7.1 mm	
Relative brightness 50.4	
Eye relief 18 mm	
Close focusing	
distance 25 m	
Weight 1170 g	
Dimensions 181 × 203 I	mm (L × W)
Characteristics Rubber armo	ouring; waterproof
Type Porro	

# Binocular 7 $\times$ 50 IF WP Compass

Order code	BAA578AA
Magnification	7×
Objective diameter	50 mm
Angular field of view	,
Real	7.5°
Apparent	52.5°
Field of view at 1000 m	131 m
Exit pupil	7.1 mm
Relative brightness	50.4
Eye relief	18 mm
Close focusing	
distance	25 m
Weight	1170 g
Dimensions	181 × 203 mm (L × W)
Characteristics	Built-in compass and scale to ascertain subject direction and
	distance or size; rubber armouring;
	waterproof, with O-ring seal and
	nitrogen gas
Туре	Porro





#### Binocular 7 $\times$ 50 IF HP WP Tropical

Order code BAA190AB Magnification 7× **Objective diameter** 50 mm Angular field of view Real 7.3° 51.1° Apparent Field of view at 1000 m 128 m Exit pupil 7.1 mm Relative brightness 50.4 Eye relief 15 mm **Close focusing** distance 24.5 m Weight 1360 g Dimensions Characteristics Туре Porro

7.3° 51.1° n 128 m 7.1 mm 50.4 15 mm 24.5 m 1360 g 217 × 216 mm (L × W) Waterproof Porro

# Binocular 7 $\times$ 50 IF HP WP Tropical

with scala

Order code Magnification Objective diameter Angular field of view Real Apparent Field of view at 1000 m Exit pupil Relative brightness Eye relief	7.3 ° 51.1 °
Close focusing distance Weight Dimensions Characteristics Type	24.5 m 1360 g 217 × 216 mm (L × W) Waterproof Porro

# Binocular 10 $\times$ 50 CF WP

Order code	BAA586AA
Magnification	10×
Objective diameter	50 mm
Angular field of view	
Real	6.2°
Apparent	62°
Field of view at 1000 m	108 m
Exit pupil	5.0 mm
Relative brightness	25
Eye relief	17.4 mm
Close focusing	
distance	17 m
Weight	1065 g
Dimensions	$195 \times 207 \text{ mm} (L \times W)$
Characteristics	Waterproof
Туре	Porro



#### Binocular 7 × 50 IF SP WP

Order code BAA194AA Magnification 7× Objective diameter 50 mm Angular field of view Real 7.3° 51.1° Apparent Field of view at 1000 m 128 m Exit pupil Relative brightness Eye relief **Close focusing** distance Weight Dimensions Characteristics Туре

7.1 mm 50.4 16.2 mm 12.3 m 1485 g 217 × 214 mm (L × W) Waterproof Porro

#### Binocular $10 \times 70$ IF SP WP

Order code	BAA195AA	
Magnification	10×	
Objective diameter	70 mm	
Angular field of view		
Real	5.1°	
Apparent	51°	
Field of view at 1000 m 89 m		
Exit pupil	7 mm	
Relative brightness	49	
Eye relief	15 mm	
Close focusing		
distance	50 mm	
Weight	1985 g	
Dimensions	$304 \times 234 \text{ mm} (L \times W)$	
Characteristics	Rubber armouring; waterproof;	
	fog-free with O-ring seal and	
	nitrogen gas	
Туре	Porro	

#### Binocular 8 × 30 DIF WP RA II

BAA408AA
8×
30 mm
7.5°
60°
i 131 m
3.8 mm
14.4
13 mm
11 m
610 g
129 × 131 mm (L × W)
Rubber armouring; waterproof;
fog-free with O-ring seal and
nitrogen gas
Roof



#### Binocular 10 $\times$ 70 IF HP WP

Order code	BAA192AB
Magnification	10×
Objectiv diameter	70 mm
Angular field of view	1
Real	5.1°
Apparent	51°
Field of view	
at 1000 m	89 m
Exit pupil	7 mm
Relative brightness	49
Eye relif	15 mm
Close focusing	
Distance	50 m
Weight	1985 g
Dimensions	$304 \times 235 \text{ mm} (L \times W)$
Туре	Porro
Characteristics	rubber armouring; waterproof;
	fog-free with O-Ring seal and
	nitron gas
Туре	Porro



#### Binocular 18 $\times$ 70 IF WP WF

Order code BAA196AA Magnification 18× Objective diameter 70 mm Angular field of view Real Apparent Field of view at 1000 m 70 m Exit pupil Relative brightness 15.2 Eye relief Close focusing distance Weight Dimensions Characteristics

4° 72° 70 m 3.9 mm 15.2 15.4 mm 81 m 2050 g 293 × 234 mm (L × W) Rubber armouring; waterproof; fog-free with O-ring seal and nitrogen gas

Porro

Туре

#### Adaptor tripod to divers Binoculars

to 7 × 50 IF HP WP Tropical 8 × 32 SE CF 10 × 42 SE CF 12 × 50 SE CF 18 × 70 IF WP WF 7 × 50 IF SP WP 10 × 70 IF SP WP 10 × 70 IF HP WP

Order code

BI71/BAB90004



# Binocular 8 × 40 DCF HP WP

Order code	BAA560AA
Magnification	8×
Objective diameter	40 mm
Angular field of view	
Real	6.5°
Apparent	52°
Field of view at 1000 m	114 m
Exit pupil	5 mm
Relative brightness	25
Eye relief	19.5 mm
Close focusing	
distance	6 m
Weight	745 g
Length	164 mm
Width	129 mm
Туре	Roof
Characteristics	Waterproof
	O-ring seals

۱m m m Waterproof and fog-free with O-ring seals and nitrogen gas

# Binocular $10 \times 40$ DCF HP WP

Order code	BAA561AA
Magnification	10×
Objective diameter	42 mm
Angular field of view	
Real	6°
Apparent	60°
Field of view at 1000 m	105 m
Exit pupil	4 mm
Relative brightness	16
Eye relief	15.5 mm
Close focusing	
distance	6 m
Weight	745 g
Length	159 mm
Width	129 mm
Туре	Roof
Characteristics	Waterproof and fog-free with
	O-ring seals and nitrogen gas





# Adaptor tripod to DCF HP WP hard

Order code

BAB90006

# Adaptor tripod to DCF HP WP soft

Order code

BAB90007

#### Binocular 8 × 32 SE CF

Order code	BAA555AA
Magnification	8×
Objective diameter	32 mm
Angular field of view	
Real	7.5°
Apparent	60°
Field of view at 1000 m	131 m
Exit pupil	4 mm
Relative brightness	16
Eye relief	17.4 m
Close focusing	
distance	3 m
Weight	630 g
Length	116 mm
Width	183 mm
Туре	Porro

# Binocular $10 \times 42$ SE CF

Order code	BAA554AC
Magnification	10×
Objective diameter	42 mm
Angular field of view	
Real	6°
Apparent	60°
Field of view at 1000 m	105 m
Exit pupil	4.2 mm
Relative brightness	17.6
Eye relief	17.4 mm
Close focusing	
distance	5 m
Weight	710 g
Length	157 mm
Width	192 mm
Туре	Porro

# Binocular $12 \times 50$ SE CF

Order code	BAA562AA
oraci coac	5.0.002.01
Magnification	12×
Objective diameter	50 mm
Angular field of view	
Real	5°
Apparent	60°
Field of view at 1000 m	87 m
Exit pupil	4.2 mm
Relative brightness	17.6
Eye relief	17.4 mm
Close focusing	
distance	7 m
Weight	900 g
Length	182 mm
Width	202 mm
Туре	Porro



#### Binocular 8 × 42 HG DCF WP

Order code Magnification **Objective diameter** Angular field of view Real Apparent Field of view at 1000 m 122 m Exit pupil Relative brightness Eye relief **Close focusing** distance Weight Length Width Туре Characteristics

BAA219AA 8× 42 mm 7° 56° m 122 m 5.3 mm 5.3 mm 5 28.1 20 mm 3 m 980 g 157 mm

139 mm Roof Prism features high-reflection Silver coating for brighter Images. Waterproof and fog-free with O-ring seals and nitrogen gas

# Nine Nine



#### Binocular 10 × 42 HG DCF WP

# Binocular $5 \times 15$ DCF Titan

Order code Magnification Objective diameter	BAA515AA 5 × 15 mm
Angular field of view Real	9°
Apparent	45°
Field of view at 1000 m	157 m
Exit pupil	3 mm
Relative brightness	9
Eye relief	15.8 mm
Close focusing	
distance	1.2 m
Weight	200 g
Length	83 mm with eyepiece normal
-	71 mm with eyepiece for
	eyeglass user
Width	103 mm
Туре	Porro
Characteristics	Titanium





Order code	BAA518AA
Magnification	7×
Objective diameter	15 mm
Angular field of view	
Real	6,6°
Apparent	46.2°
Field of view at 1000 m	115 m
Exit pupil	2.1 mm
Relative brightness	4.4
Eye relief	12 mm
Close focusing	
distance	1.5 m
Weight	190 g
Length	79 mm with eyepiece normal
	71 mm with eyepiece for
	eyeglass user
Width	103 mm
Туре	Porro
Characteristics	Titanium



# Binocular $6 \times 15$ M CF silver

Order code	BAA516AA
Magnification	6×
Objective diameter	15 mm
Angular field of view	
Real	8°
Apparent	48°
Field of view at 1000 m	140 m
Exit pupil	2.5 mm
Relative brightness	6.3
Eye relief	10.1 mm
Close focusing	
distance	2 m
Weight	130 g
Length	48 mm
Width	108 mm
Туре	Porro



# Binocular $7 \times 15$ M CF black

Order code	BAA514AA
Magnification	7×
Objective diameter	15 mm
Angular field of view	
Real	7°
Apparent	49°
Field of view at 1000 m	122 m
Exit pupil	2.1 mm
Relative brightness	4.4
Eye relief	10 mm
Close focusing	
distance	2 m
Weight	135 g
Length	47 mm
Width	108 mm
Туре	Porro



#### Binocular 8–24 × 25 CF Zoom Travelite V

Order code	BAA387AA
Magnification	8–24×
Objective diameter	24 mm
Angular field of view	1
Real	4.6°
Apparent	36.8°
Field of view at 1000 m	i 80 m
Exit pupil	3.1 mm
Relative brightness	9.6
Eye relief	13 mm
Close focusing	
distance	5 m
Weight	310 g
Dimensions	127 × 118 mm
Туре	Porro

#### Binocular 8–24 × 25 CF DX II Zoom

Order code	BAA585AA
Magnification	8–24×
Objective diameter	25 mm
Angular field of view	1
Real	4.6°
Apparent	36.8°
Field of view at 1000 m	<b>1</b> 80 m
Exit pupil	3.1 mm
Relative brightness	9.6
Eye relief	13 mm
Close focusing	
distance	4 m
Weight	355 g
Dimensions	119 × 110 mm
Туре	Porro

#### Binocular 7–15 $\times$ 35 CF Zoom Action VI

Order code	BAA605AA
Magnification	7–15×
Objective diameter	35 mm
Angular field of view	1
Real	5.5°
Apparent	38.5°
Field of view at 1000 m	<b>1</b> 96 m
Exit pupil	5 mm
Relative brightness	25
Eye relief	9.1 mm
Close focusing	
distance	8 m
Weight	770 g
Dimensions	139 × 170 mm
Туре	Porro

#### Binocular $10-22 \times 50$ CF Zoom Action VI

Order code	BAA606AA
Magnification	10–22×
Objective diameter	50 mm
Angular field of view	I
Real	3.8°
Apparent	38°
Field of view at 1000 n	<b>1</b> 66 m
Exit pupil	5 mm
Relative brightness	25
Eye relief	8.6 mm
Close focusing	
distance	15 m
Weight	950 g
Dimensions	193 × 182 mm
Туре	Porro









#### Fieldscope III

straight body type, without eyepiece

Order code Magnification Lens diameter Weight Length Width Characteristics

Fieldscope III A angled body type, without eyepiece

Order code

Weight

Length

Width

Magnification

Lens diameter

Characteristics

BDA100AA depending on eyepiece used 60 mm 1080 g 279 mm 80 mm rubber armouring; water resistant fog-free with O-ring seal and nitrogen gas

BDA102AA

60 mm

1180 g

291 mm

94 mm

rubber armouring; water resistant

depending on eyepiece used



Fieldscope III ED

straight body type, without eyepiece

Order code Magnification Lens diameter Weight Length Width Characteristics BDA101AA depending on eyepiece used 60 mm 1090 g 279 mm 80 mm rubber armouring; water resistant fog-free with O-ring seal and nitrogen gas

#### Fieldscope III ED A

angled body type, without eyepiece

Order code Magnification Lens diameter Weight Length Width Characteristics BDA103AA depending on eyepiece used 60 mm 1090 g 291 mm 94 mm rubber armouring; water resistant fog-free with O-ring seal and nitrogen gas



#### Fieldscope ED78

straight body type, without eyepiece

- Order code Magnification Lens diameter Weight Length Width Characteristics
- BDA027AA depending on eyepiece used 78 mm 1355 g 366 mm 90 mm rubber armouring; water resistant fog-free with O-ring seal and nitrogen gas



#### Order code BDA0

Fieldscope ED 78A angled body type, without eyepiece

Magnification Lens diameter Weight Length Width Characteristics BDA028AA depending on eyepiece used 78 mm 1530 g 365 mm 100 mm rubber armouring; water resistant fog-free with O-ring seal and nitrogen gas

#### **Camera adapter for Fieldscopes**

Order code Characteristics Dimensions Weight BDB010AA gives a 800 mm f/13.3 59 mm ∅ × 140 mm 330 g



#### Spottingscope 80 ST

straight body type, without eyepiece

- Order code Magnification Lens diameter Weight Length Width Characteristics
- BDA015AA depending on eyepiece used 80 mm 1400 g 390 mm 95 mm rubber armouring; water resistant



# Spottingscope 80 ST A

angled body type, without eyepiece

Order code Magnification Lens diameter Weight Length Width Characteristics BDA016AA depending on eyepiece used 80 mm 1430 g 385 mm 95 mm rubber armouring; water resistant

#### Spotter XL

Order code	BDA016AA
Magnification	16–47×
Lens diameter	60 mm
Angular field Real	2°
Apparent	32°
Field of view at 1000 m	35 m
Close focusing distance	10 m
Weight	1430 g
Length	385 mm
Width	95 mm
Characteristics	rubber armouring;
	water resistant



#### Spottingscope RAII

straight body type, without eyepiece

- Order code Magnification Lens diameter Weight Length Width Characteristics
- BDA013AA depending on eyepiece used 60 mm 935 g 299 mm 84 mm rubber armouring; water resistant fog-free with O-ring seal and nitrogen gas





angled body type, without eyepiece

Order code
Magnification
Lens diameter
Weight
Length
Width
Characteristics

BDA013AA depending on eyepiece used 60 mm 960 g 288 mm 84 mm rubber armouring; water resistant fog-free with O-ring seal and nitrogen gas



#### Oculars for Fieldscope III / IIIA / ED III / ED IIIA

Order code

#### Magnification

BI54/BDB90007 BI49WN/BDB90059 BI55WN/BDB90060 BI56N/BDB90058 BI56WN/BDB90061 BI57WN/BDB90062 BI68N/BDB90063 BI69N/BDB90064

20× (normal)
24× (wideangel)
30× (wideangel)
40× (normal)
40× (wideangel)
60× (wideangel)
20-45× (zoom)

20-60× (zoom)

#### Oculars for Spottingscope ED 78 / ED 78A

Order code

#### Magnification

BI54/BDB90007 BI49WN/BDB90059 BI55WN/BDB90060 BI56N/BDB90058 BI56WN/BDB90061 BI57WN/BDB90062 BI68N/BDB90063 BI69N/BDB90064 25× (normal) 30× (wideangel) 38× (wideangel) 50× (normal) 50× (wideangel) 25-56× (zoom) 25-75× (zoom)





#### Stereo microscope Naturescope

Order code Magnification Working distance Field of view Convergent angle Pupil distancer Diopter adjustment Weight Height at viewing position Height at carrying position Width Depth Light Battery

12.6° 56-72 mm +2 to -4 610 g 184 mm 144 mm 100 mm 94 mm 2.5 V – 0.5 A halogen lamp 3 V lithium CR123A

BJA001AA

94.4 mm

11 mm

20×

#### Stereo microscope Naturescope Mini

Order code Magnification Working distance Field of view Pupil distancer Diopter adjustment +2 to -4 Weight Height at viewing position Height at carrying position Width Height (at viewing position) (at carrying position)

BJA002AA 20× 94.4 mm 12.8 mm 51-72 mm 395 g 156 mm

124 mm 94 mm 156 ~ 202 mm Distance pupil 64 mm 124 mm





#### Monocular $5 \times 15$ HG

Order code Magnification Objective diameter	BDA009AA 5× 15 mm		
Angular field of view Real	٩°		
Apparent	9° 45°		
Field of view at 1000 m 157 m			
Exit pupil	3 mm		
Relative brightness			
Eye relief	0.6 m		
Length	71 mm		
Width	30 mm		
Weight	75 g		



# Monocular 7 × 15 HG

Order code Magnification Objective diameter	BDA005AA 7× 15 mm
Angular field of view	<b>c c c</b>
Real	6.6°
Apparent	16.2°
Field of view at 1000 m	115 m
Exit pupil	2.1 mm
Relative brightness	4.4
Eye relief	0.8
Length	71 mm
Width	30 mm
Weight	75 g



#### Field Image System MXA

BDB901AF

Order number CCD camera signal CCD chip White balance Power consumption 160 mAh External terminal Power source

Weight Dimensions

Monitor LCD display panel Display area Resolution Colour alignment External terminal Power source

Weight Dimensions NTSC or PAL 1/4 inch, 270,000 pixels automatic DC input; video input  $\times$  2; Four 1.5 V alkaline-manganese batteries; AC adapter(DC 6 V) 90 g (without batteries) 114 × 67.4 × 42 mm  $(W \times H \times D)$ 

LCD 4 inch, TFT colour LCD 80.7 (H) × 60.6 (V) mm 383 (H) × 0.259 (V) R, G, B DC input, video input × 1; Eight alkaline-manganese batteries 1.5 V; AC adapter (DC 12 V) 370 g (without batteries)  $131 \times 109 \times 90$  mm  $(W \times H \times D)$ 

#### Performance when attached to the Fieldscope

Objective lens diameter 60 mm Close focussing distance 5 m Focal length (equivalent to 35 mm (135) format camera lens) 4,000 mm Field of view at 1000 m  $0.86 \times 0.65 \,\mathrm{m}$ 

Objective lens diameter 78 mm Close focussing distance 5 m Focal length (equivalent to 35 mm (135) format camera lens) 5,000 mm Field of view at 1000 m 0.69 × 0.52 m









# Nikon Laser 400

Laser range finder

Order code	BKA006AA silver BKA007AA black	
Magnification Effective lens	8×	
diameter	20 mm	
Field of view	6.3°	
Exit pupil	30.4 mm	
Eye relief	10 mm	
Distance display	digitally in LCD viewfinder	
Measurement accuracy10–99 m (tolerance ±0.5 m)		
	100-400 m (tolerance $\pm 1$ m)	
Measurement range	Approx. 10–400 m	
Power source	One CR 2 3V lithium battery;	
	automatic power shut-off	
	after 8 sec.	
Dimensions	94 × 36.5 × 72.5 mm	
	$(L \times W \times H)$	
Weight	200 g (without batteries)	



Order code	BKA004AA
Magnification	8×
Effective lens diameter	28 mm
Field of view	4.5°
Exit pupil	3.4 mm
Eye relief	14 mm
Distance display	digitally in LCD viewfinder
Measurement accuracy	2 m (tolerance ±1 m)
Measurement range	Approx. 16–800 m (up to
	approx 999 m for highly reflec-
	tive objects
Mode selection	Targeting modes (standard,
	rain, reflective, greater than
	150 m); scan mode and metre
	indicator
Power source	Four 1.5V alkaline manganese
	batteries; automatic power
	shut-off after 8 sec.
Dimensions	122 × 92 × 50 mm
	$(L \times W \times H)$
Weight	270 g (without batteries)
5	5.





# Nikon Night Search

Order code	BLA001AB
Urder code	BLAUUTAB
Resolution	36 lp (linepair) / mm
Magnification	1×
IR-Illuminator	built-in
Field of view	34°
Focal length	27 mm
Focus range	27 cm to infinity
Dioptre adjustment	-1 to +6
Power source	One CR 123A 3V lithium
	batterie
Dimensions	149 × 52 × 76 mm
	$(L \times W \times D)$
Weight	450 g (without batteries)
Characteristics	water resistant



# Teleconverter 2.8×

Order code Magnification BLB00004 2.8×

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