

Nikkor Inter- changeable Lenses

- SLR
- EL NIKKOR
- LARGE FORMAT

Nikkor Lenses: An Introduction

Nikkor Interchangeable Lenses

Perhaps nowhere is the superiority of the Nikon system of photography so dramatically apparent as in the realm of interchangeable lenses: Nikkor lenses—the only lenses in all the world crafted specifically for use with Nikon and Nikkormat cameras. These lenses, from 6mm Fisheye to 2000mm Telephoto, give the Nikon and Nikkormat owner unlimited creative freedom to choose the perfect lens for every application. Even more important, these Nikkor lenses are the finest available today for 35mm photography.

AI and Non-AI Series

There are two basic series of Nikkor lenses for Nikon-system cameras.

- **AI-Nikkors** from 6mm to 600mm provide automatic maximum-aperture indexing (AI) and full-aperture metering with Nikon F2A, F2AS, EL2, FM, and Nikkormat FT3 cameras, their secondary aperture scale also provides Aperture Direct Reading (ADR) with Nikon F2A, F2AS and FM models. Each AI-Nikkor (easily identifiable by the secondary aperture scale) also incorporates a meter-coupling shoe providing full-aperture metering with all other Nikon and Nikkormat meter systems.
- **Other Nikkor Lenses** offer similar optical performance but do not incorporate the AI/ADR features. They are used with stopdown exposure measurement on Nikon F2A, F2AS, EL2, FM, and Nikkormat FT3 cameras. However, most Auto-Nikkors equipped with meter-coupling shoe can be converted to AI operation and full-aperture metering with the newest Nikon-system cameras. For details, please see "Nikkor Lens AI-Conversion" page at the end of this catalog section.

Diaphragms—automatic, pre-set, or manual—of both lens types function in an identical manner with all Nikon-system cameras.

Nikon's Own Optical Glass

Actually one of the largest proprietary lensmakers in the world, Nikon is one of a select few camera manufacturers who make their own optical glass. In fact, Nikon's glassmaking facilities are so extensive that Nikon scientists can choose from more than 220 glass types to assure the finest possible image quality from each lens type, without compromise.



Nikkor Lenses: An Introduction

Many Historic Nikon Advances

It may truly be said that the history of single-lens reflex optics is, essentially, the history of Nikon for virtually every slr optical advance, from the first Fisheye lenses to the first zoom lenses comparable in image quality to the finest fixed focal-length lenses, has been enjoyed first by photographers within the Nikon system. Among the most revolutionary Nikon innovations are:

- **Integrated Coating (IC).** This advanced multi-layer process, now applied to virtually all Nikkor slr lenses from 6mm to 2000mm significantly reduces internal reflections and image-degrading "flare." Benefits: increased light transmission, image contrast, and color fidelity—the hallmarks of every Nikkor lens.
- **Extra-Low Dispersion (ED) Glass.** Historically, ultra-long focal length lenses have exhibited chromatic aberration causing color "fringing", while this can be partially overcome in black-and-white photography through filtration, it is most prominent—and not subject to filtration—in color. Nikon Extra-low Dispersion glass overcomes this traditional problem by providing near-apochromatic color correction. In fact, many ED-Nikkors are so highly corrected that they require no refocusing for infrared photography! Yet, unlike delicate fluorite materials, Nikon ED glass is as stable and durable as other optical glass types, preventing focus shift and other variations irrespective of climate or temperature, and permitting their use in exposed front and rear elements, as well as internally, for optimum performance.
- **Close Focusing Correction System.** Popularly referred to as the "floating element" system, this enables designated Nikkor wide-angle lenses to provide uniformly excellent performance from close range to infinity, through an ingenious system of internally "floating" elements, repositioning themselves automatically as the focusing ring is operated. Nikkor wide-angle lenses with this feature demonstrate truly exceptional flatness of field and freedom from aberrations throughout their entire focusing range.
- **Internal Focusing.** This Nikon advance assures increased image sharpness with telephoto lenses. Instead of the entire lens being moved during focusing, only an internal optical group is moved, resulting in a dramatic improvement in resolution as well as appreciable reductions in length as compared to conventional focusing systems. Extra-fast handling also results, since a shorter focusing motion is required with the internal focusing system.

Long-Lasting Mechanical Precision

This optical excellence embodied in every Nikkor lens is complemented by superior mechanical precision. Aperture mechanisms in Nikkor lenses operate on ball-bearing races to assure consistently accurate stop-down action even in high-speed motorized use, and even after thousands of exposures. Diaphragms have positive click stops at each aperture setting, with positive intermediate settings possible. Focusing systems achieve their responsive, lasting smoothness with finely machined metal barrels and precision threads. Lens elements are secured in position by threaded retaining rings.

Mounting flanges are constructed of hardened bronze and stainless steel—materials carefully selected for their wear resistance. As a result, each time you attach a Nikkor lens to your camera, it is aligned perfectly with the camera's film plane for optimal sharpness—a vital consideration with modern high-speed and ultra-telephoto lenses, where even the slightest impairment of mounting accuracy can visibly degrade image quality.

All specifications subject to change without notice.

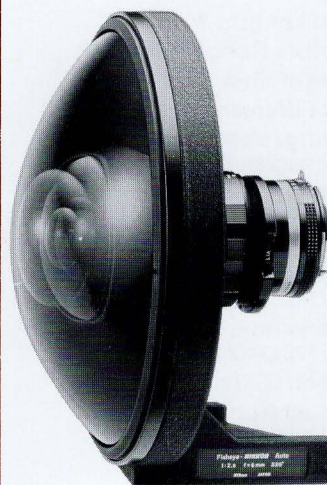
Fisheye Nikkor Lenses

Among the most striking of Nikon optical innovations, Fisheye-Nikkors were initially developed for use in meteorological and astronomical research. Recording not only everything in front of the camera, but also objects at the sides (even, with 6mm Nikkors, objects *behind* it), they offer unique benefits in environmental, surveillance, and security applications as well as a multitude of industrial uses—picturing the interiors of boilers and pipelines, for instance. Moreover, the spectacular pictorial effects they produce have literally created a new way of seeing in sports and news coverage, fashion and commercial work, and special-effects photography.

With their extremely short focal lengths, Fisheye-Nikkors provide enormous depth-of-field, extending from infinity to within inches of the film plane. Their sharpness easily meets demanding professional requirements. All are equipped with built-in color-correction filters, and all except the 16mm f3.5 produce circular images on the film. The 6mm f2.8, 8mm f2.8, and 16mm f3.5 provide through-the-lens viewing and full-aperture metering with all Nikon and Nikkormat meter systems, the 6mm f5.6 and 10mm f5.6 are used with camera mirror locked up and supplied with special Optical Centering Finders. The 10mm f5.6 Fisheye-Nikkor is designed for specialized Orthographic Projection, providing equal brilliance and density throughout the image area for easy determination of the 'configuration' factor for the camera's location—a particular advantage in studies of illumination and heat radiation patterns, all other Fisheye-Nikkors have normal, 'equidistant' projection.

Each automatic AI-Fisheye-Nikkor provides automatic diaphragm control and full-aperture metering with all Nikon system cameras, as well as the AI (Automatic Indexing) and ADR (Aperture Direct Reading) functions with compatible camera models.

6mm f2.8 Auto-Nikkor AI



Focal Length: 6mm
Aperture Range: f2.8—f22
Angle of View: 220°
No. of Elements/Groups: 12/9
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: Built-in Skylight, Med. Yellow, Dark Yellow, Orange and Red Filters
Dimensions: 9.3x6.7" (236x171mm)
Weight: 11.5 lbs. (5.2kg)
Product No. 1105 (Non-AI, 225*)

6mm f5.6 Nikkor



Focal Length: 6mm
Aperture Range: f5.6—f22
Angle of View: 220°
No. of Elements/Groups: 9/6
Coating: Nikon standard coating
Minimum Focus: Fixed
Diaphragm Type: Manual
Filter Size: Built-in Skylight, Med. Yellow, Dark Yellow, Orange, Red, and Light Green Filters
Dimensions: 3.6x3.2" (92x81mm)
Weight: 15.2 oz. (430g)
Other: Supplied with 160° Optical Centering Finder w/Case
Product No. 227

*Nikon standard coating

Fisheye Nikkor Lenses

8mm f2.8 Auto-Nikkor AI



Focal Length: 8mm
Aperture Range: f2.8—f22
Angle of View: 180°
No. of Elements/Groups: 10/8
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: Built-in Skylight, Med. Yellow, Dark Yellow, Orange and Red Filters
Dimensions: 4.8x5.5" (123x140mm)
Weight: 35.3 oz. (1.0kg)
Product No.: 1102 (Non-AI, 226*)

10mm f5.6 OP-Nikkor



Focal Length: 10mm
Aperture Range: f5.6—f22
Angle of View: 180°
No. of Elements/Groups: 9/6
Coating: Nikon standard coating
Minimum Focus: Fixed
Diaphragm Type: Manual
Filter Size: Built-in Skylight, Med. Yellow, Dark Yellow, Dark Orange, Red, and Light Green Filters
Dimensions: 3.3x4.1" (84x105mm)
Weight: 14.1 oz. (400g)
Other: Supplied with 160° Optical Centering Finder w/Case
Product No.: 228

*Nikon standard coating

16mm f3.5 Auto-Nikkor AI



Focal Length: 16mm
Aperture Range: f3.5—f22
Angle of View: 170°
No. of Elements/Groups: 8/5
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: Built-in Medium Yellow, Orange, Red, and Clear filters
Dimensions: 2.7x2.4" (68x60.5mm)
Weight: 11.5 oz. (330g)
Product No.: 1109 (Non-AI, 1009)

All specifications subject to change without notice.

Wide-Angle Nikkor Lenses

Nikon acknowledges the importance of wide-angle optics by offering the most innovative array in all 35mm. Ranging from the super-wide, rectilinear 13mm and 15mm f5.6 through the compact 18mm and 20mm f4, 24mm f2 and f2.8, and including no fewer than six 28mm and 35mm lenses, they provide the Nikon-system photographer with the ability to expand the area recorded by his camera for stunning landscape, architectural, and all-round perspectives. Because of their intrinsically great depth-of-field, wide-angle Nikkors are often selected for candid, news and photojournalism assignments—situations in which constant refocusing is often inconvenient or impossible.

Yet it is for sheer optical excellence that the Nikkor wide-angles are most highly prized. Through the innovation of Nikon's 'floating element' system, Nikkor 13mm and 15mm f5.6, 24mm f2 and f2.8, 28mm f2, and 35mm f1.4 lenses automatically reposition element groups as the lens is focused, providing superior edge-to-edge sharpness and flatness of field even at close range, a result once considered impossible with slr wide-angle optics. The exceptionally high speed of Nikkor 28mm and 35mm f2 and 35mm f1.4 lenses makes pinpoint focusing sharpness easy to achieve even under dim lighting—where, traditionally, wide-angles are often difficult to focus due to their relatively moderate speed and inherently great depth-of-field. For optimum light transmission, freedom from flare, and color fidelity, all Nikkor wide-angles receive Nikon's multi-layer Integrated Coating (IC) on selected elements, the brilliant image contrast thus assured is yet another reason for the overwhelming preference for Nikkor wide-angles among discriminating photographers throughout the world

Each automatic AI-Nikkor wide-angle listed provides automatic diaphragm control and full-aperture metering with all Nikon-system cameras, as well as the AI (Automatic Indexing) and ADR (Aperture Direct Reading) functions with compatible camera models. Nikon also offers two special perspective control (PC) Nikkors, detailed in the 'Nikkor Special Lenses' section.

13mm f5.6 Auto-Nikkor AI



Focal Length: 13mm
Aperture Range: f5.6—f22
Angle of View: 118°
No. of Elements/Groups: 16/12
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: Special Behind-Lens
Dimensions: 4.5x4.0" (115x101mm)
Weight: 43.7 oz. (1240g)
Other: Floating element system. Integral lens hood. Supplied with Medium Yellow, Orange, Red and clear filters.
Product No.: 1110 (Non-AI, 1010)

15mm f5.6 Auto-Nikkor AI



Focal Length: 15mm
Aperture Range: f5.6—f22
Angle of View: 110°
No. of Elements/Groups: 14/12
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: Built-in Skylight, Medium Yellow, Orange, and Red Filters
Dimensions: 3.6x3.5" (92x88mm)
Weight: 22.6 oz. (640g)
Other: Floating element system
Product No.: 1111 (Non-AI, 1011)

Wide-Angle Nikkor Lenses

18mm f4 Auto-Nikkor AI



Focal Length: 18mm
Aperture Range: f4—f22
Angle of View: 100°
No. of Elements/Groups: 13/9
Coating: Multi-layer Nikon
Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: Series 9*
Dimensions: 3.5x2.3"
(89x58.5mm)
Weight: 11.1 oz. (315g)
Product No. 1113
(Non-AI, 1013)

20mm f4 Auto-Nikkor AI



Focal Length: 20mm
Aperture Range: f4—f22
Angle of View: 94°
No. of Elements/Groups: 10/8
Coating: Multi-layer Nikon
Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x1.9"
(63.5x47.5mm)
Weight: 7.4 oz. (210g)
Product No. 1115
(Non-AI, 1015)

*Filters used with Accessory Lens Hood

24mm f2 Auto-Nikkor AI



Focal Length: 24mm
Aperture Range: f2—f22
Angle of View: 84°
No. of Elements/Groups: 11/10
Coating: Multi-layer Nikon
Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x2.4"
(63x61mm)
Weight: 10.8 oz. (305g)
Other: Floating element
system
Product No. To be announced
Delivery: To be announced

24mm f2.8 Auto-Nikkor AI



Focal Length: 24mm
Aperture Range: f2.8—f22
Angle of View: 84°
No. of Elements/Groups: 9/9
Coating: Multi-layer Nikon
Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x2.2"
(63x55mm)
Weight: 9.5 oz. (265g)
Other: Floating element
system
Product No. 1116
(Non-AI, 1016)

All specifications subject to change without notice.

Wide-Angle Nikkor Lenses

28mm f2 Auto-Nikkor AI



Focal Length: 28mm
Aperture Range: f2—f22
Angle of View: 74°
No. of Elements/Groups: 9/8
Coating: Multi-layer Nikon
Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x2.7"
(64.5x68mm)
Weight: 12.5 oz. (355g)
Other: Floating element
system
Product No.. 1119
(Non-AI, 1019)

28mm f2.8 Auto-Nikkor AI



Focal Length: 28mm
Aperture Range: f2.8—f22
Angle of View: 74°
No. of Elements/Groups: 7/7
Coating: Multi-layer Nikon
Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x2.1"
(63.5x54mm)
Weight: 8.5 oz. (240g)
Product No. 1120
(Non-AI, 1020)

28mm f3.5 Auto-Nikkor AI



Focal Length: 28mm
Aperture Range: f3.5—f22
Angle of View: 74°
No. of Elements/Groups: 6/6
Coating: Multi-layer Nikon
Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x2.2"
(63x56mm)
Weight: 8.5 oz. (240g)
Product No. 1121
(Non-AI, 1021)

35mm f1.4 Auto-Nikkor AI



Focal Length: 35mm
Aperture Range: f1.4—f16
Angle of View: 62°
No. of Elements/Groups: 9/7
Coating: Multi-layer Nikon
Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.7x2.9"
(67.5x74.5mm)
Weight: 14.4 oz. (410g)
Other: Floating element
system
Product No. 1129
(Non-AI, 1029)

35mm f2 Auto-Nikkor AI



Focal Length: 35mm
Aperture Range: f2—f22
Angle of View: 62°
No. of Elements/Groups: 8/6
Coating: Multi-layer Nikon
Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x2.4"
(63.5x61mm)
Weight: 9.9 oz. (280g)
Product No.. 1128
(Non-AI, 1028)

35mm f2.8 Auto-Nikkor AI



Focal Length: 35mm
Aperture Range: f2.8—f22
Angle of View: 62°
No. of Elements/Groups: 6/6
Coating: Multi-layer Nikon
Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x2.1"
(63.5x54mm)
Weight: 8.5 oz. (240g)
Product No.. 1127
(Non-AI, 1027)

Normal Nikkor Lenses

A normal lens, by definition, is one whose focal length is approximately equal to the diagonal of the film format. This produces a perspective that closely matches that of the human eye—making the normal lens, in practical terms, the most useful single lens for a majority of picture-taking situations. To these advantages, Nikkor normal lenses add still another: spectacular image quality, with sharpness, flatness of field, and color correction approaching perfection. Because of their high speed, picture taking in dim light is greatly simplified, as is critically accurate focusing, in any light. Crisp, flare-free images are assured by multi-layer Nikon Integrated Coating—a particular advantage at wider lens apertures, where image-degrading flare might otherwise be experienced. In fact, many a Nikon and Nikkormat owner has chosen his camera as much for its matchless Nikkor optics as for the advantages of the camera itself.

The Nikon system provides six lenses in normal-focal-length range (45-58mm). In addition to the three standard types listed in this section, these include the Micro-Nikkor—an all-purpose lens of renowned sharpness from close-up range to infinity; the GN-Nikkor providing automatic flash-exposure control, and the Noct-Nikkor, a unique ultraspeed lens designed specifically for low-light and night photography. (Because of their special characteristics, these Nikkors are detailed in the *Micro-Nikkor* and *Special Nikkor Lenses* catalog sections.)

The 55mm f1.2 is the fastest normal Nikkor—excellent for dim-light photography in general and candids and photojournalism in particular. The 50mm f1.4 also offers exceptional speed, yet is conveniently small and light. The 50mm f2 provides equal sharpness and close focusing at the most moderate cost. All three normal AI-Nikkors provide automatic diaphragm operation and full-aperture metering with all Nikon-system cameras, and activate the Automatic Indexing (AI) and Aperture Direct Reading (ADR) functions of compatible camera models. All accept standard 52mm filters.

50mm f1.4 Auto-Nikkor AI



Focal Length: 50mm
Aperture Range: f1.4—f16
Angle of View: 46°
No. of Elements/Groups: 7/6
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 17.7" (0.45m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x1.9" (64x49mm)
Weight: 9.2 oz. (260g)
Product No.: 1133 (Non-AI, 1033)

50mm f2 Auto-Nikkor AI



Focal Length: 50 mm
Aperture Range: f2.0—f16
Angle of View: 46°
No. of Elements/Groups: 6/4
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 17.7" (0.45m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x2.0" (63.5x50.5mm)
Weight: 7.8 oz. (220g)
Product No.: 1136 (Non-AI, 1036)

55mm f1.2 Auto-Nikkor AI



Focal Length: 55mm
Aperture Range: f1.2—f16
Angle of View: 43°
No. of Elements/Groups: 7/5
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 19.7" (0.5m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.8x2.3" (72x58.5mm)
Weight: 14.5 oz. (410g)
Product No.: 1138 (Non-AI, 1038)

Telephoto Nikkor Lenses

The most comprehensive telephoto lens system ever created for 35mm photography, with focal lengths from 85mm to 2000mm to produce images as much as 40 times larger than those produced by a 50mm lens. In each focal length, Telephoto Nikkor lenses are distinguished by crisp, pin-point definition. Image contrast, particularly important in telephoto optics because of the inevitable atmospheric haze between camera and subject at long distances, is particularly high due to multi-layer Integrated Coating (IC) applied to all Tele-Nikkor lenses. Unusually compact and lightweight, Telephoto Nikkors further expand the dramatic capabilities of Nikon and Nikkormat photography.

All Telephoto AI-Nikkors from 85mm to 300mm (and many Tele Nikkors described in the ED-Nikkor Telephotos' section) provide automatic diaphragm control and full-aperture metering with all Nikon-system cameras, as well as the Automatic Indexing (AI) and Aperture Direct Reading (ADR) functions with compatible Nikon and Nikkormat models.

85mm f2 Auto-Nikkor AI

Combines high speed, close focusing, and lightweight, convenient handling. Critically sharp—excellent for portraiture, candid, news.



Focal Length: 85mm
Aperture Range: f2—f22
Angle of View: 28° 30'
No. of Elements/Groups: 5/5
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 33.5" (0.85m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x2.4" (63.5x60.7mm)
Weight: 15.2 oz. (430g)
Product No.: 1151 (Non-AI f1.8, 1051)

105mm f2.5 Auto-Nikkor AI

Offers pleasing perspective, large image size, compactness, and fast speed. A world-wide favorite for portraiture and travel photography.



Focal Length: 105mm
Aperture Range: f2.5—f32
Angle of View: 23° 20'
No. of Elements/Groups: 5/4
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 39.4" (1.0m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.6x3.1" (66x78mm)
Weight: 15.3 oz. (435g)
Other: Snap-On Lens Hood supplied
Product No.: 1156 (Non-AI, 1056)

Telephoto Nikkor Lenses

135mm f2 Auto-Nikkor AI

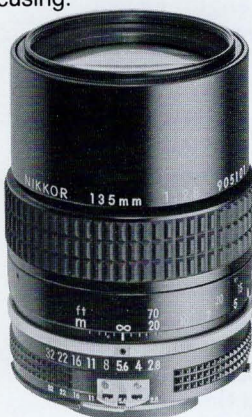
Versatile telephoto with extremely high speed; at closest focus, gives same image size as 50mm lens at 19" with almost three times the camera-to-subject distance.



Focal Length: 135mm
Aperture Range: f2—f22
Angle of View: 18°
No. of Elements/Groups: 6/4
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 51.2" (1.3m)
Diaphragm Type: Fully Auto
Filter Size: 72mm
Dimensions: 3.2x4.1" (81x103mm)
Weight: 30.3 oz. (860g)
Other: Built-In Telescopic Lens Hood
Product No. 1159 (Non-AI, 1059)

135mm f2.8 Auto-Nikkor AI

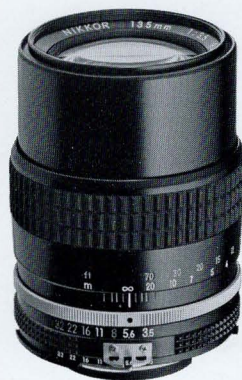
Many consider this compact, lightweight telephoto a perfect combination of extra speed, convenient handling, and close focusing.



Focal Length: 135mm
Aperture Range: f2.8—f32
Angle of View: 18°
No. of Elements/Groups: 5/4
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 51.2" (1.3m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x3.6" (64.5x91.5mm)
Weight: 15.2 oz. (430g)
Other: Built-In telescopic Lens Hood
Product No. 1162 (Non-AI, 1062)

135mm f3.5 Auto-Nikkor AI

An excellent all-purpose telephoto, ideal where higher speed is not essential.



Focal Length: 135mm
Aperture Range: f3.5—f32
Angle of View: 18°
No. of Elements/Groups: 4/4
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 51.2" (1.3m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.6x3.5" (65x89.5mm)
Weight: 14.1 oz. (400g)
Other: Built-In Telescopic Lens Hood
Product No. 1160 (Non-AI, 1060)

180mm f2.8 Auto-Nikkor AI

Unequalled for professional stage and sports photography as well as general available-light work; focuses to within 6 feet.



Focal Length: 180mm
Aperture Range: f2.8—f32
Angle of View: 13° 40'
No. of Elements/Groups: 5/4
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 70.9" (1.8m)
Diaphragm Type: Fully Auto
Filter Size: 72mm
Dimensions: 3.2x5.6" (81x141mm)
Weight: 29.3 oz. (830g)
Other: Built-In Telescopic Lens Hood. Supplied with Case.
Product No. 1165 (Non-AI, 965)

200mm f4 Auto-Nikkor AI

A favorite for sports and wildlife, with 4x magnification compared to 50mm lenses. Compact, light weight, and close focusing.



Focal Length: 200mm
Aperture Range: f4.0—f32
Angle of View: 12° 20'
No. of Elements/Groups: 5/5
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 78.7" (2.0m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.7x5.0" (68x126mm)
Weight: 19 oz. (540g)
Other: Built-In Telescopic Lens Hood
Product No. 1167 (Non-AI, 1067)

300mm f4.5 Auto-Nikkor AI

Gives 6x magnification compared to normal lens, with excellent resolution, contrast and corrections, even at maximum aperture.



Focal Length: 300mm
Aperture Range: f4.5—f22
Angle of View: 8° 10'
No. of Elements/Groups: 6/5
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 13.0' (4.0m)
Diaphragm Type: Fully Auto
Filter Size: 72mm
Dimensions: 3.1x8.0" (78.5x203mm)
Weight: 40.2 oz. (1140g)
Other: Built-In Telescopic Lens Hood
Product No. 1170 (Non-AI, 1070)

All specifications subject to change without notice.

ED-Nikkor Telephoto Lenses for direct camera mounting

A new series of high-performance long telephotos incorporating another historic Nikon advance: ED (Extra-Low Dispersion) optical glass. This unique Nikon formulation provides these extra advantages.

- **Superior chromatic correction** by focusing more portions of the spectrum (with several lenses, including infrared!) in the same focal plane. This prevents the color 'fringing' and reduced sharpness and contrast otherwise often experienced with long telephoto lenses, to insure optimum sharpness and contrast with both black & white and color films without special, corrective filtration
- **Excellent Durability and Stability.** Unlike delicate, synthetic fluorite materials, Nikon ED glass is virtually as hard and stable as all other Nikon optical glass types. This permits the use of ED elements for exposed (front or rear) surfaces and prevents the phenomenon of 'focus shift' in changing temperature or climate, to which fluorite optics are particularly susceptible.

ED Tele-Nikkor 300mm f2.8, 400mm f3.5, 600mm f5.6, and 800mm f8 automatic lenses provide another meaningful Nikon innovation: internal focusing. In this system, the central lens group only moves during focusing, the front and rear groups remain stationary, as does the overall length of the lens. The result: superior optical performance, right down to the closest focusing distance—itsself closer than conventional telephotos of equivalent focal length. Additional benefits include more compact construction and lighter weight than conventional long teles, as well as faster handling—since less physical movement of the central optics is required during focusing than with ordinary focusing systems.

All ED Nikkors incorporate multilayer Nikon Integrated Coating for enhanced light transmission, contrast and freedom from flare or 'haze'—benefits especially prized in telephotography, where contrast is often reduced due to inevitable atmospheric haze. AI-Nikkors (all except the 300mm f2.8 manual and 800mm f8) provide automatic diaphragm control and full-aperture metering with all Nikon-system cameras, and activate the Automatic Indexing (AI) and Aperture Direct Reading (ADR) functions of compatible camera models. With others, stopdown exposure measurement is employed.

300mm f2.8 Auto ED-Nikkor AI

Unexcelled speed and handling convenience, enhanced by the split-second response of Nikon Internal Focusing (IF).



Focal Length: 300mm
Aperture Range: f2.8—f22
Angle of View: 8° 10'
No. of Elements/Groups: 8/6
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 13' (4m)
Diaphragm Type: Fully Auto
Filter Size: 122mm
Dimensions: 5.4x9.8" (138x249mm)
Weight: 5.5 lbs. (2500g)
Other: Built-in Telescopic Lens Hood
Product No.: 1171

300mm f4.5 Auto ED-Nikkor AI

A powerful, self-contained telephoto system with the advantages of Nikon ED glass.



Focal Length: 300mm
Aperture Range: f4.5—f22
Angle of View: 8° 10'
No. of Elements/Groups: 6/4
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 13.0' (4.0m)
Diaphragm Type: Fully Auto
Filter Size: 72mm
Dimensions: 3.1x7.9" (78.5x200mm)
Weight: 2.4 lbs. (1100g)
Other: Built-In Telescopic Lens Hood
Product No.: 1172 (Non-AI, 1272)

ED-Nikkor Telephoto Lenses for direct camera mounting

400mm f3.5 Auto ED-Nikkor AI

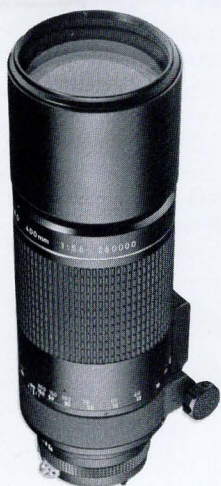
The first lens of this speed ever offered in 400mm focal length; incorporates new Nikon internal focusing system for exceptionally compact size and close focusing without image deterioration.



Focal Length: 400mm
Aperture Range: f3.5—f22
Angle of View: 6° 10'
No. of Elements/Groups: 8/6
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 14.0' (4.5m)
Diaphragm Type: Fully Auto
Filter Size: 39mm Filter slot built-in
Dimensions: 4.9x10.4" (125x263mm)
Weight: 5.7 lbs. (2600g)
Other: Built-in Telescopic Lens Hood and tripod socket; 1 Gelatin filter holder and 5 filters supplied
Product No.: 1173

400mm f5.6 Auto ED-Nikkor AI

A compact, quick-handling telephoto that brings far away subjects sixteen times closer than 50mm lenses. Light enough to hand hold, with built-in, adjustable tripod/pistol grip socket.



Focal Length: 400mm
Aperture Range: f5.6—f32
Angle of View: 6° 10'
No. of Elements/Groups: 5/3
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 16.4' (5.0m)
Diaphragm Type: Fully Auto
Filter Size: 72mm
Dimensions: 3.3x10.4" (84x263mm)
Weight: 49.4 oz. (1400g)
Other: Built-In Telescopic Lens Hood; case supplied
Product No.: 1174 (Non-AI, 1274)

600mm f5.6 Auto ED-Nikkor AI

Incorporates latest Nikon ED glass, IC coating, and internal focusing for superb optical performance and handling ease. May be hand-held at fast shutter speeds.



Focal Length: 600mm
Aperture Range: f5.6—f22
Angle of View: 4° 10'
No. of Elements/Groups: 7/6
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 18' (5.5m)
Diaphragm Type: Fully Auto
Filter Size: 39mm Filter slot built-in
Dimensions: 5.3x15" (134x382mm)
Weight: 5.5 lbs. (2500g)
Other: Built-in Telescopic Lens Hood; 1 Gelatin filter holder and 5 filters supplied
Product No.: 1193

800mm f8 Auto ED-Nikkor

Advanced internal focusing permits continuous focusing to 32.8 feet—nearly 2x closer than conventional 800mm designs.



Focal Length: 800mm
Aperture Range: f8—f32
Angle of View: 3°
No. of Elements/Groups: 9/7
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 32.8' (10.0m)
Diaphragm Type: Auto
Filter Size: 122mm
Dimensions: 5.2x18.1" (131.5x458.5mm)
Weight: 8.4 lbs. (3800g)
Other: Built-in Telescopic Lens Hood and tripod socket. Stopdown exposure measurement
Product No.: To be announced
Delivery: To be announced

Note: Other ED-Nikkors are available in focal lengths to 1200mm. Please refer to *Zoom Nikkors* and *Tele Nikkors* catalog sections for information.

All specifications subject to change without notice.

ED-Nikkor Telephoto Lenses for direct camera mounting

A new series of high-performance long telephotos incorporating another historic Nikon advance: ED (Extra-Low Dispersion) optical glass. This unique Nikon formulation provides these extra advantages:

- **Superior chromatic correction** by focusing more portions of the spectrum (with several lenses, including infrared!) in the same focal plane. This prevents the color 'fringing' and reduced sharpness and contrast otherwise often experienced with long telephoto lenses, to insure optimum sharpness and contrast with both black & white and color films without special corrective filtration.
- **Excellent Durability and Stability.** Unlike delicate, synthetic fluorite materials, Nikon ED glass is virtually as hard and stable as all other Nikon optical glass types. This permits the use of ED elements for exposed (front or rear) surfaces and prevents the phenomenon of 'focus shift' in changing temperature or climate, to which fluorite optics are particularly susceptible.

ED Tele-Nikkor 400mm f3.5, 600mm f5.6, and 800mm f8 lenses provide another meaningful Nikon innovation: internal focusing. In this system, the central lens group only moves during focusing, the front and rear groups remain stationary, as does the overall length of the lens. The result: superior optical performance, right down to the closest focusing distance—itsself closer than conventional telephotos of equivalent focal length. Additional benefits include more compact construction and lighter weight than conventional long teles, as well as faster handling—since less physical movement of the central optics is required during focusing than with ordinary focusing systems.

All ED Nikkors incorporate multilayer Nikon Integrated Coating for enhanced light transmission, contrast and freedom from flare or 'haze'—benefits especially prized in telephotography, where contrast is often reduced due to inevitable atmospheric haze. AI-Nikkors (all except the 300mm f2.8 and 800mm f8) provide automatic diaphragm control and full-aperture metering with all Nikon-system cameras, and activate the Automatic Indexing (AI) and Aperture Direct Reading (ADR) functions of compatible camera models. With the 300mm f2.8 preset and 800mm f8 automatic, stopdown exposure measurement is employed.

300mm f2.8 ED-Nikkor

Exceptionally high speed makes this lens ideal for sports, candid, wildlife and surveillance photography.



Focal Length: 300mm
Aperture Range: f2.8—f32
Angle of View: 8° 10'
No. of Elements/Groups: 6/5
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 13.0' (4.0m)
Diaphragm Type: Manual
Filter Size: 122mm
Dimensions: 4.9x9.9" (125x251mm)
Weight: 5.7 lbs. (2600g)
Other: Built-in Telescopic Lens Hood. Stopdown exposure measurement
Product No. 1298

300mm f4.5 Auto ED-Nikkor AI

A powerful, self-contained telephoto system with the advantages of Nikon ED glass.



Focal Length: 300mm
Aperture Range: f4.5—f22
Angle of View: 8° 10'
No. of Elements/Groups: 6/4
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 13.0' (4.0m)
Diaphragm Type: Fully Auto
Filter Size: 72mm
Dimensions: 3.1x7.9" (78.5x200mm)
Weight: 2.4 lbs. (1100g)
Other: Built-In Telescopic Lens Hood
Product No.: 1172 (Non-AI, 1272)

ED-Nikkor Telephoto Lenses for direct camera mounting

400mm f3.5 Auto ED-Nikkor AI

The first lens of this speed ever offered in 400mm focal length; incorporates new Nikon internal focusing system for exceptionally compact size and close focusing without image deterioration.



Focal Length: 400mm
Aperture Range: f3.5—f22
Angle of View: 6° 10'
No. of Elements/Groups: 8/6
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 14.0' (4.5m)
Diaphragm Type: Fully Auto
Filter Size: 41mm Filter slot built-in
Dimensions: 4.9x10.4" (125x263mm)
Weight: 5.7 lbs. (2600g)
Other: Built-in Telescopic Lens Hood and tripod socket; 1 Gelatin filter holder and 5 filters supplied
Product No. To be announced
Delivery: To be announced

400mm f5.6 Auto ED-Nikkor AI

A compact, quick-handling telephoto that brings faraway subjects sixteen times closer than 50mm lenses. Light enough to hand hold, with built-in, adjustable tripod/pistol grip socket.



Focal Length: 400mm
Aperture Range: f5.6—f32
Angle of View: 6° 10'
No. of Elements/Groups: 5/3
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 16.4' (5.0m)
Diaphragm Type: Fully Auto
Filter Size: 72mm
Dimensions: 3.3x10.4" (84x263mm)
Weight: 49.4 oz. (1400g)
Other: Built-In Telescopic Lens Hood; case supplied
Product No. 1174 (Non-AI, 1274)

600mm f5.6 Auto ED-Nikkor AI

Incorporates latest Nikon ED glass, IC coating, and internal focusing for superb optical performance and handling ease. May be hand-held at fast shutter speeds.



Focal Length: 600mm
Aperture Range: f5.6—f22
Angle of View: 4° 10'
No. of Elements/Groups: 7/6
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 18' (5.5m)
Diaphragm Type: Fully Auto
Filter Size: 41mm filter slot built in
Dimensions: 4.9x15" (125x382mm)
Weight: 5.5 lbs. (2500g)
Other: Built-in Telescopic Lens Hood; 1 Gelatin filter holder and 5 filters supplied
Product No.. To be announced
Delivery: To be announced

800mm f8 Auto ED-Nikkor

Advanced internal focusing permits continuous focusing to 32.8 feet—nearly 2x closer than conventional 800mm designs.



Focal Length: 800mm
Aperture Range: f8—f32
Angle of View: 3°
No. of Elements/Groups: 9/7
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 32.8' (10.0m)
Diaphragm Type: Auto
Filter Size: 122mm
Dimensions: 5.2x18.1" (131.5x458.5mm)
Weight: 8.4 lbs. (3800g)
Other: Built-in Telescopic Lens Hood and tripod socket. Stopdown exposure measurement
Product No.. To be announced
Delivery: To be announced

Note: Other ED-Nikkors are available in focal lengths to 1200mm. Please refer to *Zoom Nikkors* and *Tele Nikkors* catalog sections for information.

All specifications subject to change without notice.

400mm-1200mm Tele-Nikkor Lenses

These powerful optics are the lenses professionals use to bring sports and news events, space shots, wildlife, and other hard-to-approach subjects 'close up'. Providing from 8 to 24 times magnification compared to normal lenses, the Tele-Nikkors consist of a lens 'head' designed for use in either of two interchangeable Focusing Mounts. Either mount accepts all lenses in this series and contains an automatic diaphragm mechanism, providing apertures to f22, for quick, convenient operation with the 400mm, 600mm, and 800mm Nikkors. Additionally, the 600mm, 800mm, and 1200mm Nikkors also contain built-in diaphragms for manual aperture control to f64.

Focusing Mount AU-1 (Product No. 205) contains a built-in filter slot accepting standard Nikon 52mm filters and is supplied with shoulder strap. The Standard Focusing Mount (Product No. 199) is similar, but without filter slot or shoulder strap.

All Tele-Nikkors feature multi-layer Nikon Integrated Coating and permit stopdown exposure measurement with all Nikon and Nikkormat meter systems. All have built-in telescoping lens hoods and rotating tripod sockets. Tele-Nikkor 600mm, 800mm, and 1200mm lenses are also available as ED-Nikkors, with the improved chromatic correction, contrast, and sharpness made possible by Nikon ED (Extra-low Dispersion) optical glass.

400mm f4.5 Auto-Nikkor

Large maximum aperture allows use of faster shutter speeds for consistently sharp pictures. At the minimum focus of 18', it covers an area just 10.4x15.6 inches, making it a superb lens for photography of birds or wildlife as well as a broad variety of long-range applications.



Focal Length 400mm
Aperture Range: f4.5—f22
Angle of View: 6° 10'
No. of Elements/Groups: 4/4
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 18.0' (5.5m)
Diaphragm Type: Auto
Filter Size: 122mm*
Dimensions: 5.3x10.8" (135x275mm)
Weight: 4.2 lbs. (1900g)
Other: *Accepts 52mm filters when used with Focusing Mount AU-1 Stopdown exposure measurement.
Product No. 970

600mm f5.6 Auto-Nikkor & ED-Nikkor

Magnifies twelvefold compared to normal 50mm lens, yet measures only 11 inches long for convenient storage and portability. Its full stop of extra speed (compared to 800mm lenses) makes it a prized tool in surveillance photography as well as sports, nature, and other assignments involving far-off subjects.



Focal Length 600mm
Aperture Range: f5.6—f22 (automatic)
Angle of View: 4° 10'
No. of Elements/Groups: 5/4
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 35.0' (11.0m)
Diaphragm Type: Automatic and manual.
Filter Size: 122mm*
Dimensions: Nikkor, 5.3x11.7" (135 mm)
ED-Nikkor 5.2x12.3" (133 mm)
Weight: Nikkor, 5.3 lbs. (2400g); ED-Nikkor 5.1 lbs. (2300g)
Other: *Accepts 52mm filters when used with Focusing Mount AU-1 Stopdown exposure measurement.
Product No. Nikkor, 972
ED-Nikkor, 1292

400mm-1200mm Tele-Nikkor Lenses

800mm f8 Auto-Nikkor & ED-Nikkor

Sixteen times magnification compared to normal 50mm lens; at the minimum focus of 70' it fills the film frame with an area just 18.9x28.4 inches—the equivalent of a 50mm lens at 3.6 feet! Excellent brilliance and resolution.



Focal Length: 800mm
Aperture Range:
f8—f22 (automatic)
f8—f64 (manual)
Angle of View: 3°
No. of Elements/Groups: 5/5
Coating: Multi-layer Nikon
Integrated Coating
Minimum Focus: 70.0' (20.0m)
Diaphragm Type: Automatic
and manual.
Filter Size: 122mm*
Dimensions: Nikkor 5.3x20"
(135x510mm)
ED-Nikkor, 5.2x19.6"
(133x498mm)
Weight: Nikkor, 5.1 lbs. (2300g)
ED-Nikkor, 6.4 lbs. (2900g)
Other: *Accepts 52mm filters
when used with Focusing
Mount AU-1 Stopdown
exposure measurement.
Product No. Nikkor, 973
ED-Nikkor, 1294

1200mm f11 Nikkor & ED-Nikkor

24x magnification compared to 50mm lenses—most powerful of all refractor-type Nikkor lenses. Manual aperture control f11—f64. Optical 'module' is only 28.8" long for portability in field work. Superb sharpness and contrast.



Focal Length: 1200mm
Aperture Range: f11—f64
Angle of View: 2°
No. of Elements/Groups:
Nikkor, 5/5; ED-Nikkor 5/4
Coating: Multi-layer Nikon
Integrated Coating
Minimum Focus: 165.0' (50.0m)
Diaphragm Type: Manual
Filter Size: 122mm*
Dimensions: Nikkor 5.3x28.8"
(135x731mm);
ED-Nikkor, 5.2x28.6"
(133x727mm)
Weight: Nikkor, 6.8 lbs. (3100g)
ED-Nikkor, 8.2 lbs. (3700g)
Other: *Accepts 52mm filters
when used with Focusing
Mount AU-1 Stopdown
exposure measurement.
Product No. Nikkor, 974
ED-Nikkor, 1296

Focusing Mount AU-1

For all Tele-Nikkor lenses 400mm—1200mm; built in automatic diaphragm with aperture range f4.5—f22. Integral filter slot accepts standard Nikon 52mm filters. With shoulder strap. Product No. 205.



Standard Focusing Mount

Offers same features and performance as Focusing Mount AU-1 except does not incorporate filter slot. Uses a special support cradle supplied with the unit. Product No. 199.



All specifications subject to change without notice.

Reflex Nikkor Lenses

The Reflex Nikkors—500mm, 1000mm, and 2000mm—bring to photography the optical principles of the catadioptric astronomical telescopes constructed by Nikon for many leading observatories.

Unlike conventional lenses, in which the light travels an essentially straight path, Reflex Nikkors reflect the image through a system of lenses and mirrors—thus the designation 'mirror optics'. This reflex design permits significant reductions in overall size and weight, compared to conventional optics of equivalent focal length. Even more importantly, it provides superior sharpness and contrast by greatly reducing the chromatic aberration typical of long tele optics. The result: images of consistently excellent sharpness, contrast, and color fidelity unprecedented in long-range telephotography.

As conventional iris diaphragms are unsuitable for catadioptric lenses, with Reflex Nikkors the thru-the-lens exposure measurement is made simply by adjusting the shutter speed and/or built-in filters. (Exposures may, of course, be set automatically with Nikon EL2 and Nikkormat EL-series cameras.) Each Reflex Nikkor has a built-in tripod socket and spring catch permitting rotation of the camera body for horizontal or vertical use. And, each features multi-layer Nikon Integrated Coating for maximum light transmission, image contrast, and freedom from flare.

500mm f8 Nikkor

Only 5.6" in length—less than 1/3rd its focal length! May be hand-held at high shutter speeds.



Focal Length: 500mm
Aperture: f8
Angle of View: 5°
No. of Elements/Groups: 5/3
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 13.1 (4.0m)
Diaphragm Type: Fixed
Filter Size: 39mm behind-lens
Dimensions: 3.7x5.6" (93x141.5mm)
Weight: 2.2 lbs. (1000g)
Other: Supplied with UV, Yellow, Red & ND Filters
Product No. 950

1000mm f11 Nikkor

Provides images 20x larger than 50mm lenses, yet weighs only 4.2 lbs.

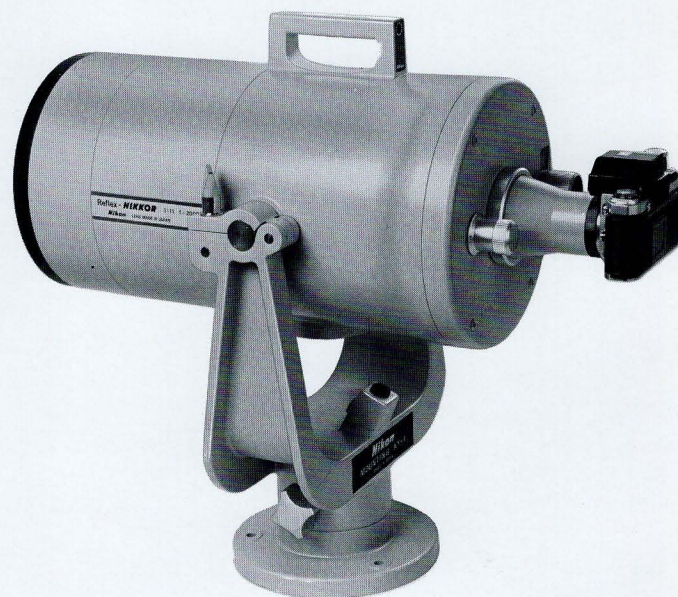


Focal Length: 1000mm
Aperture: f11
Angle of View: 2° 30'
No. of Elements/Groups: 5/5
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 25.0' (7.6m)
Diaphragm Type: Fixed
Filter Size: Built-in; UV, Light Amber, Light Blue, Orange, and Neutral Density Filters supplied
Dimensions: 4.7x9.5" (119x241mm)
Weight: 4.2 lbs. (1900g)
Product No. 952

2000mm f11 Nikkor

The most powerful lens in the Nikon system, with 40x magnification. Conventional optical design would necessitate a length of six feet; Nikon catadioptric system compresses this into just 23.5 inches. Grip handle contains alignment finder for rapid subject location. An optional accessory mounting 'yoke' (Product No. 403) provides convenient rotation and elevation in tripod use.

Focal Length: 2000mm
Aperture: f11
Angle of View: 1° 10'
No. of Elements/Groups: 5/5
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 59.1 (18.0m)
Diaphragm Type: Fixed
Filter Size: Built-in; UV, Medium Yellow, Orange, and Red Filters. Supplied with metal case.
Dimensions: 10.3x23.5" (262x598mm)
Weight: 38.6 lbs. (17500g)
Product No. 978



Zoom-Nikkor Lenses

Widely acclaimed as the first zoom lenses for 35mm photography equal to the finest fixed focal-length optics in sharpness, Zoom-Nikkors permit the continuous selection of focal length for the precise composition, magnification, and perspective desired. Once in focus, they maintain pinpoint sharpness throughout their entire zoom range.

For landscape, architectural, and news photography, the Zoom-Nikkor 28-45mm, 35-70mm, and 43-86mm lenses span the most-needed focal lengths swiftly and sharply. For sports, wildlife, and action shots, the 50-300mm and 80-200mm provide renowned sharpness and split-second operating speed. And, for otherwise inaccessible subjects at great distance, the 180-600mm, 200-600mm, and 360-1200mm offer unrivalled capabilities.

Zoom-Nikkor 43-86mm, 80-200mm, 180-600mm, 200-600mm, and 360-1200mm lenses feature one-hand zoom/focus control, the others employ independent zoom and focusing rings, specially textured for quick, precise adjustment. All provide added light transmission and image contrast through multi-layer Nikon Integrated Coating. Each AI-Nikkor zoom gives automatic diaphragm control and full-aperture metering with all Nikon-system cameras, and activates the AI and ADR features of compatible camera models; with others, stopdown exposure measurement is used.

28-45mm f4.5 Auto-Nikkor AI



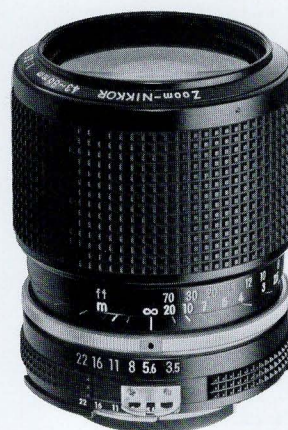
Focal Length: 28-45mm
Aperture Range: f4.5—f22
Angle of View: 74°—50°
No. of Elements/Groups: 11/7
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 23.6" (0.6m)
Diaphragm Type: Fully Auto
Filter Size: 72mm
Dimensions: 3.0x3.6" (75x91mm)
Weight: 15.5 oz. (440g)
Product No. 1180 (Non-AI, 1080)

35-70mm f3.5 Auto-Nikkor AI



Focal Length: 35-70mm
Aperture Range: f3.5—f22
Angle of View: 62°—34° 20'
No. of Elements/Groups: 10/9
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 39.4" (1.0m)
Diaphragm Type: Fully Auto
Filter Size: 72mm
Dimensions: 3.0 x 4.0" (75x101mm)
Weight: 19.4 oz. (550g)
Product No. To be announced
Delivery: To be announced

43-86mm f3.5 Auto-Nikkor AI



Focal Length: 43-86mm
Aperture Range: f3.5—f22
Angle of View: 53°—28° 30'
No. of Elements/Groups: 11/8
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 47.2" (1.2m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.6x3.4" (65.5x85.1mm)
Weight: 15.9 oz. (450g)
Product No. 1181 (Non-AI, 1081)

Zoom-Nikkor Lenses

50-300mm f4.5 Auto-Nikkor AI



Focal Length: 50-300mm
Aperture Range: f4.5—f22
Angle of View: 46°—8° 10'
No. of Elements/Groups: 20/13
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 8.2' (2.5m)
Diaphragm Type: Fully Auto
Filter Size: 95mm
Dimensions: 3.9x11.5" (98x292mm)
Weight: 5.1 lbs. (2300g)
Product No.: 1182 (Non-AI, 1082)

80-200mm f4.5 Auto-Nikkor AI



Focal Length: 80-200mm
Aperture Range: f4.5—f32
Angle of View: 30° 10'—12° 20'
No. of Elements/Groups: 15/10
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 70.9" (1.8m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 3.0x6.4" (75.5x162mm)
Weight: 28.9 oz. (820g)
Other: Supplied with Case.
Product No.: 1184 (Non-AI, 1084)

180-600mm f8 Auto-Nikkor



Focal Length: 180-600mm
Aperture Range: f8.0—f32
Angle of View: 13° 40'—4° 10'
No. of Elements/Groups: 18/11
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 8.2' (2.5m)
Diaphragm Type: Auto
Filter Size: 95mm
Dimensions: 4.1x15.9" (105x403mm)
Weight: 7.6 lbs. (3200g)
Other: Stopdown exposure measurement
Product No.: 1285

200-600mm f9.5 Auto-Nikkor AI



Focal Length: 200-600mm
Aperture Range: f9.5—f32
Angle of View: 12° 20'—4° 10'
No. of Elements/Groups: 19/12
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 13.0' (4m)
Diaphragm Type: Auto
Filter Size: Series 9 (82mm)¹
Dimensions: 3.5x15" (89x382mm)
Weight: 5.3 lbs. (2400g)
Other: *Close-Up Lens (supplied) permits focusing to 7.5' (2.3m)
¹Accepts Series 9 filters with accessory lens hood. Stopdown exposure measurement.
Product No.: 1086

360-1200mm f11 Auto-Nikkor



Focal Length: 360-1200mm
Aperture Range: f11—f32
Angle of View: 6° 50'—2°
No. of Elements/Groups: 20/12
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 19.7' (6m)
Diaphragm Type: Auto
Filter Size: 122mm
Dimensions: 4.9x27 7" (125x704mm)
Weight: 15.7 lbs. (7100g)
Other: Stopdown exposure measurement.
Product No.: 1287

All specifications subject to change without notice.

Micro-Nikkor Lenses

Evolved from decades of Nikon leadership in optics for graphic arts, scientific, and macro/micro instruments, Micro-Nikkors are optimized for critical sharpness and flatness of field at closer range than conventional photographic lenses. Yet, their 5-element formulas provide exceptional performance even when focused at infinity leading many photographers to employ them as all-purpose optics. Both the 55mm f3.5 and 105mm f4 Micro-Nikkors have extended helical mounts permitting continuous focusing from infinity to 0.5x magnification (1/2 life-size), by attaching the automatic extension ring available for each lens, the focusing range is extended from 0.5x to 1x—actual or 'life-size'—where a subject measuring just 24x36mm (under 1x1½") fills the entire film frame

The compact 55mm f3.5 Micro-Nikkor offers a field of view closely approximating that of a normal lens, enabling the photographer to record, for example, first an entire field of flowers, then a close-up of a single specimen, with ease. The 105mm f4 Micro-Nikkor is particularly suitable for close-up photography where a greater lens-to-subject distance is desired, as in the photography of insects or small animals; this extended lens-to-subject distance also permits greater freedom in positioning lights conveniently. Yet, it also serves as a superb medium telephoto, with a perspective and comfortable working distance that make it especially prized for portraiture. Both Micro-Nikkors stop down to f32 for maximum depth-of-field (a special benefit in close-up and photomacrography), and provide color-coded distance/magnification readouts. And, both feature Nikon multi-layer Integrated Coating for crisp, flare-free images at every aperture.

Each AI-Micro-Nikkor lens and extension ring provides automatic diaphragm control and full-aperture metering with Nikon F2A and F2AS Photomic, FM, EL2, and Nikkormat FT3 cameras, additionally, both AI-Micro-Nikkor lenses activate the Aperture Direct Reading (ADR) function of F2A, F2AS, and FM models. The AI-Micro-Nikkors also provide automatic diaphragm and full-aperture metering with all other Nikon and Nikkormat meter systems when mounted directly on the camera, when the extension rings are employed, stopdown metering is used with non-AI camera models.

55mm f3.5 Micro-Auto-Nikkor AI



Focal Length: 55mm
Aperture Range: f3.5—f32
Angle of View: 43°
No. of Elements/Groups: 5/4
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 9.5" (0.241m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.6x2.5" (65.5x64.5mm)
Weight: 8.3 oz. (245g)
Product No. Lens only, 1140;
with PK-13 ring, 1141
(Non-AI w/PK-3 Ring, 1040)

Automatic AI Extension Ring PK-13

27.5mm extension ring provides continuous focusing from 0.5x to 1x (1:2—1:1) with 55mm f3.5 Micro Auto-Nikkor AI lens; gives automatic diaphragm control and full-aperture metering with all AI-system Nikon and Nikkormat cameras. Not for use with non-AI lenses. Product No. 2653.

105mm f4 Micro-Auto-Nikkor AI



Focal Length: 105mm
Aperture Range: f4—f32
Angle of View: 23° 20'
No. of Elements/Groups: 5/3
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 18.5" (0.47m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.9x4.1" (74.5x104mm)
Weight: 17.6 oz. (500g)
Product No. Lens only, 1154;
with PN-11 ring, 1155
(Non-AI w/PN-1 Ring, 1054)

Automatic AI Extension Ring PN-11

52.5mm extension ring for focusing with 105mm f4 Micro Auto-Nikkor AI lens from 0.5x to 1x (1:2—1:1). Automatic diaphragm control and full-aperture metering with all AI-system Nikon and Nikkormat cameras. For use with AI-lenses exclusively. Product No. 2647

Special-Purpose Nikkor Lenses

- PC-Nikkors
- GN-Nikkor
- Noct-Nikkor
- Medical-Nikkor

PC-Nikkors

These unique 28mm and 35mm lenses bring a control of perspective to 35mm, previously obtainable only with large-format view cameras, by sliding up to 11mm in any direction while attached to the camera—left, right, up, down even diagonally. Thus the Nikon-system photographer can record subjects such as buildings in their natural, straight-line perspective—eliminating the 'keystoning' or seemingly tilted perspective resulting when the camera is tilted to include the entire subject. Similarly, this flexibility permits picture-taking of subjects partially obscured by trees, poles, or other distracting elements, without changing position, by merely sliding the lens elements until the desired composition is seen in the reflex finder. PC-Nikkors also provide a simple and precise solution to panoramic photography: taking a *pair of* pictures of the subject, each with the lens at its maximum lateral 'shift' position.

The PC-Nikkor 28mm f4 provides the wider field of view and greater depth-of-field, the compact 35mm f2.8 PC offers the faster speed and wider aperture range (f2.8-f32). Both are prized for their versatility in architectural and landscape photography, and are perfectly suitable for use as standard wide-angle lenses. Their diaphragms are the pre-set type, permitting stop-down exposure measurement with all Nikon/Nikkormat meter systems. And both offer the advantages of multi-layer Nikon Integrated Coating for flare-free, high-contrast crispness throughout their aperture range.

28mm f4 PC-Nikkor



Focal Length: 28mm
Aperture Range: f4—f22
Angle of View: 74°
No. of Elements/Groups: 10/8
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Manual Preset
Filter Size: 72mm
Dimensions: 3.1x2.7" (78x67.5mm)
Weight: 14.1 oz. (410g)
Other: Supplied with Case.
Product No.: 1022

35mm f2.8 PC-Nikkor



Focal Length: 35mm
Aperture Range: f2.8—f32
Angle of View: 62°
No. of Elements/Groups: 8/7
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 11.8" (0.3m)
Diaphragm Type: Manual Preset
Filter Size: 52mm
Dimensions: 2.6x2.6" (66.5x66.5mm)
Weight: 11.8 oz. (335g)
Other: Supplied with Case.
Product No.: 1026

45mm f2.8 GN Auto-Nikkor

This smallest and lightest of all Nikkors provides consistently accurate flash exposures with any electronic or bulb flash, automatically. With its special Guide Number scale preset, the GN-Nikkor automatically and continually adjusts the taking aperture as you focus. As the flash is always used manually, normally at full power, the smallest available lens opening is obtained providing maximum depth of field. Alternatively, with Nikon SB-5 electronic flash units, the 1/4 power or MD flash setting may be used for automatically-exposed flash pictures in motorized photography at speeds to 3.8 frames per second.

With the Guide Number control disengaged, the GN-Nikkor provides automatic diaphragm control and full-aperture metering with Nikon/Nikkormat meter systems using meter-coupling shoe. (With AI-system camera models, stop-down exposure measurement is employed.) The superb performance is enhanced by multi-layer Nikon Integrated Coating.



Focal Length: 45mm
Aperture Range: f2.8—f32
Angle of View: 50°
No. of Elements/Groups: 4/3
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 31.5" (0.8m)
Diaphragm Type: Fully Auto
Filter Size: 52mm
Dimensions: 2.5x1.2" (64x31mm)
Weight: 6.0 oz. (170g)
Other: Guide Number Scale 32-320
Product No.: 920

Special-Purpose Nikkor Lenses

58mm f1.2 Noct Auto-Nikkor

Designed for unrivalled sharpness and clarity at extremely low lighting levels and wide-aperture shooting. Special, aspherical lens surfaces minimize aberrations otherwise typical at f1.2. Superb contrast and freedom from flare, even in high-contrast shots including both total darkness and bright night lighting. Application of Nikon Integrated Coating (IC) further controls ghosts and flare. Accepts standard Nikon 52mm filters, weighs just 17 1 ounces. Ideally suited to extended sensitivity of Nikon F2AS Photomic meter system. Provides full-aperture metering with all Nikon-system cameras, and activates the Automatic Indexing and Aperture Direct Reading functions of compatible Nikon-system cameras.



Focal Length 58mm
Aperture Range: f1.2—f16
Angle of View: 40° 50'
No. of Elements/Groups: 7/6
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 19.7" (0.5m)
Diaphragm Type: Fully Automatic
Filter Size: 52mm
Dimensions: 2.9x2.5" (74x63mm)
Weight: 17 1 oz. (485g)
Other: Incorporates Aspheric Elements
Product No.: To be announced.
Delivery: To be announced.

200mm f5.6 Medical Auto-Nikkor

The Medical-Nikkor reduces close-up photography to automatic simplicity. Originally intended for medical and dental applications, it is equally effective for scientific and industrial use, where its completely automatic operation and ample working distances offer unique advantages.

Basically, the Medical-Nikkor is a fixed-focus lens for use at about 11 feet subject distance, where it provides 1/15 reproduction. A series of supplementary lenses, supplied with the lens, can be attached singly or in various combinations for shooting at closer distances with reproduction ratios from 1:8 to 3:1. In each case, the camera is moved towards or away from the subject until the finder image is at its sharpest. The lens incorporates two light sources. four incandescent bulbs serve as modeling lights for easy viewing and focusing, a synchronized electronic ring-light flash gives even, shadowless illumination for the exposure. A choice of AC or battery power pack (requires 8-1.5v D-size Alkaline batteries, Mallory Type MN-1300 or equivalent, not included) offers added versatility.

Accurate exposure is automatically assured. Setting the lens for ASA film rating and desired reproduction ratio also presets the automatic diaphragm for correct exposure. And, the Medical-Nikkor can be set to imprint any frame with the magnification ratio in use, or numerically from 1 to 38.

Medical-Nikkor AC System with AC Power Supply, 5' power cord, 8" PC cord and compartment case, Product No. 980. Medical-Nikkor DC System with Battery Pack and same accessories, Product No. 981. Accessories available include case for DC power pack, Product No. 408, 13' power cord Product No. 379, as well as replacement lamps, cords, and close-up lenses as shown in the current Nikon Price List.



Focal Length: 200mm
Aperture Range: f5.6—f45
Angle of View: 12° 20'
No. of Elements/Groups: 4/4
Coating: Multi-layer Nikon Integrated Coating
Minimum Focus: 13.2"
Diaphragm Type: Auto
Filter Size: 38mm (special)
Dimensions: 3.1x7.0" (79x177mm)
Weight: 24.7 oz. (700g)
Other: Supplied with 6 auxiliary lenses, 4 spare focusing lamps, 59.1" (1.5m) connecting cord and shutter cord.
Product No. See above for desired combination

All specifications subject to change without notice.

Nikkor Lens Consumer AI-Modification Service

An essential element of the Nikon system of photography is its inherent capacity for growth, permitting the Nikon system photographer to continually enjoy state-of-the-art optics and advances, in a way that seemingly not only challenges but actually defies obsolescence. This historic Nikon commitment to excellence without obsolescence is again demonstrated in the unique AI Modification service, through which owners of millions of present Auto-Nikkor lenses can have their lenses modified for AI-operation at nominal cost.

What The AI-Modification Does.

In the AI Modification, Auto-Nikkor lenses with meter-coupling shoe (prong) are provided with facilities for Automatic Maximum Aperture Indexing (AI), Aperture Direct Reading (ADR), and full-aperture metering with the newest high-performance Nikon-system cameras. This modification in no way affects their use with previous Nikon/Nikkormat-system cameras: aperture indexing, metering, automatic-diaphragm action, focusing range, and viewfinder information functions operate exactly as they did prior to the modification. You can easily identify any AI-Nikkor lens (including modified lenses) by the secondary aperture scale, which allows for the Aperture Direct Reading facility of the new cameras.

What Lenses Can Be Modified.

The overwhelming majority of Auto-Nikkor lenses with meter-coupling shoe manufactured from 1967 on can be modified for AI compatibility. However, due to differences in construction, some Auto-Nikkor lenses (predominantly those made prior to 1967) cannot be modified. Lenses suitable for modification are identified by serial number on the chart on the back of this page.

What It Costs.

Most Auto-Nikkors listed on the reverse side can be modified for AI operation at a cost of \$18.50 per lens (including return shipping, insurance, and handling charges). In some instances, non-AI lenses require special, precision milling for AI-Modification and will cost more than \$18.50 to be modified. Nikon will provide a price quotation for these lenses (indicated on the chart) upon receipt of a Consumer Request for AI Modification.

How to Arrange for AI Modification

This service is designed for direct handling between Nikon Inc. and owners of Auto-Nikkor lenses. The procedure outlined below is addressed to such owners.

A special Consumer Information Sheet concerning requests for AI Modification is available from Nikon Inc. in Garden City, N.Y. by writing to the attention of the AI Modification Service Dept. Dealers interested in AI Modification of lenses in their inventories may contact Nikon Inc.

1 Check the serial numbers of your present Auto-Nikkor lenses against the AI Modification Chart. If they are listed, they probably can be modified to AI.

2. Make a list of the Auto-Nikkor lens or lenses that you wish to modify indicating a) focal length, b) maximum f-stop, c) serial number of each lens. Next to each lens, indicate the Modification Category number (1, 2 or 3), which you will find on the AI Modification Chart.

3. Send your list of lens(es) along with your name and address to:

AI Modification Service
Nikon Incorporated
P.O. Box 390
Mineola, New York 11501

4. Upon receipt and review of your list of lenses, Nikon will mail you a Lens Report indicating

- a) Which of your lenses can be modified to AI
- b) The cost of modification for each lens
- c) The proper Service Center to send your lenses to
- d) Your Reservation Number with the date your lenses should arrive at the designated location. **Do not** send any lenses for modification before receiving your Reservation Number

5. When you receive your Lens Report from Nikon, select only those lenses which the report indicates can be modified to AI. Pack them carefully in a sturdy box, using front and rear lens caps and with the lenses inside individual plastic bags. Surround them with plenty of foam rubber, newspaper or other shock-absorbing material. For added security, we suggest placing the lenses in one box, then packing that box within an outer box also containing foam rubber or other padding. Seal the outer package carefully.

6. Check off the lenses you are sending for modification on the Lens Report you received from Nikon, along with all the other information requested. Place the Lens Report along with a check or money order for the full amount due in an envelope and attach the envelope to your package of lenses. Address and mail the package, prepaid and insured, to the Nikon Service Center indicated on your Lens Report. Be sure your return address is on the package, too!

Your Nikon Service Center will make every effort to return your lenses as quickly as possible. As there are literally millions of Nikkor lenses presently in use, it appears almost inevitable that some delays will occur. Nikon asks for your understanding should you be affected by such unavoidable delays.

Nikon Service Centers have been equipped currently for AI Modification in 3 locations across the country. This number will be increased, and in time, there will be many more locations at which AI Modifications can be done.

However, not all Nikon Service Facilities will be equipped to modify all lenses since the specialized tools required for modification vary for different lenses.

For the address of the proper Service Facility to modify your particular lenses, write directly to AI Nikon Inc., P.O. Box 390, Mineola, N.Y. 11501

7 Only Nikkor lenses can be modified by Nikon Inc. All other brands must be referred back to the original manufacturer or distributor

More About AI Modification

- Non-coupled Nikkor lenses—Reflex Nikkors, Ultra-Tele Nikkors, PC-Nikkors and others—work with the new cameras exactly as they did with earlier Nikon and Nikkormat models and do not require modification.
- Your present Auto-Nikkor lenses can be used with the new cameras even without modification using stop-down metering. So, you may want to modify only those which you use most often).
- Meter systems of earlier Nikon system cameras cannot be modified to the AI/ADR system. However, AI-Nikkors, including modified lenses, can be used with these cameras just like earlier Auto-Nikkors.
- Nikon Inc. will perform AI lens modifications as described herein until December 31, 1980. Availability of modification service cannot be guaranteed after that date.

Nikkor Lens Consumer AI-Modification Service

Nikkor lenses that can be modified to AI and ADR

Cost of Lens Modification per category		\$18.50	\$33.50	\$43.00
Lens	Serial Numbers	Category 1	Category 2	Category 3
13mm f5.6	175021—and higher			•
15mm f5.6	321001—and higher			•
18mm f4	173111—and higher		•	
20mm f3.5	421241—and higher	•		
20mm f4	103001—and higher	•		
24mm f2.8	242821—257010	•		
	257011—and higher	•		
28mm f2	280001—335000	•		
	335001—and higher	•		
28mm f2.8	382011—and higher	•		
28mm f3.5	195531—301010	•		
	625611—and higher	•		
35mm f1.4	350001—385000		•	
	385001—and higher		•	
35mm f2	690101—and higher	•		
35mm f2.8	255311—920110	•		
50mm f1.4	532011—635510	•		
	635511—2797020	•		
	2797021—3750400	•		
	3750401—and higher	•		
50mm f2	742111 785010	•		
	785011—and higher	•		
55mm f1.2	184711—970110	•		
85mm f1.8	219901—and higher	•		
105mm f2.5	234011—and higher	•		
135mm f2	175011—and higher	•		
135mm f2.8	189311—430000	•		
	430001 730000	•		
	730001—and higher	•		
135mm f3.5	111111 720100	•		
	831211—and higher	•		
180mm f2.8	312011—and higher		•	
200mm f4	304411—420000	•		
	420001—670002	•		
	670003—and higher	•		
300mm f4.5	326511—480000	•		
	480001—and higher	•		
300mm f4.5 ED	173101—and higher		•	
400mm f5.6	256031—and higher		•	
400mm f5.6 ED	260001—and higher		•	
6mm f2.8	628001—and higher			•
8mm f2.8	230011—and higher			•
16mm f3.5	272281—and higher			•
45mm f2.8 GN	710101—and higher		•	
† 55mm f3.5 Micro	238011—and higher	•		
† 105mm f4 Micro	174011—and higher		•	
28-45mm Zoom f4.5	174011—and higher		•	
43-86mm Zoom f3.5	438611—and higher		•	
50-300mm Zoom f4.5	740101—and higher		•	
80-200mm Zoom f4.5	101911—and higher		•	
85-250mm Zoom f4	184711—and higher		•	

† New AI extension rings (PK-13 for 55mm Micro Nikkor lens. PN-11 for 105mm Micro Nikkor lens), available as accessories, must be used for full-aperture meter operation in 1:2—1:1 range. Original rings may be used with stop-down metering. *Modification of previous PK and PN-series extension rings is not available.*

Effective July 1 1977

Specifications and prices are subject to change without notice.

Nikon, Inc., Garden City, N.Y. 11530. Subsidiary of Ehrenreich Photo-Optical Industries, Inc. Other offices in Niles, Ill., and San Francisco, Calif. 

Nikkor Lenses Technical Specifications

Fisheye Nikkor Lenses

Product No.	Focal Length	Aperture Range	Diaphragm	Angle of View	No. of Elements/Groups	Minimum Focus	Filter Size	Dimensions: $\phi \times$ Length	Weight
1105	6mm AI	f2.8-f22	Auto	220°	12/9	11.8"	Built-in	9.3x6.7"	11.5 lbs.
227†	6mm	f5.6-f22	Manual	220°	9/6	Fixed	Built-in	3.6x3.2"	15.2 oz.
1102	8mm AI	f2.8-f22	Auto	180°	10/8	11.8"	Built-in	4.8x5.5"	35.3 oz.
228†	10mm OP	f5.6-f22	Manual	180°	9/6	Fixed	Built-in	3.3x4.1"	14.1 oz.
1109	16mm AI	f3.5-f22	Auto	170°	8/5	11.8"	Built-in	2.7x2.4"	11.6 oz.

†These lenses incorporate standard coating and are used with camera mirror locked up. All others feature Nikon multi-layer Integrated Coating and permit through-the-lens viewing and metering.

Wide Angle Nikkor Lenses

Product No.	Focal Length	Aperture Range	Diaphragm	Angle of View	No. of Elements/Groups	Minimum Focus	Filter Size	Dimensions: $\phi \times$ Length	Weight
1110	13mm AI	f5.6-f22	Auto	118°	16/12	11.8"	Behind-lens	4.5x4.0"	43.7 oz.
1111	15mm AI	f5.6-f22	Auto	110°	14/12	11.8"	Built-in	3.6x3.5"	22.6 oz.
1113	18mm AI	f4-f22	Auto	100°	13/9	11.8"	Series 9	3.5x2.3"	11 1 oz.
1115	20mm AI	f4-f22	Auto	94°	10/8	11.8"	52mm	2.5x1.9"	7.4 oz.
*	24mm AI	f2-f22	Auto	84°	11/10	11.8"	52mm	2.5x2.4"	10.8 oz.
1116	24mm AI	f2.8-f22	Auto	84°	9/9	11.8"	52mm	2.5x2.2"	9.5 oz.
1119	28mm AI	f2-f22	Auto	74°	9/8	11.8"	52mm	2.5x2.7"	12.5 oz.
1120	28mm AI	f2.8-f22	Auto	74°	7/7	11.8"	52mm	2.5x2.1"	8.5 oz.
1121	28mm AI	f3.5-f22	Auto	74°	6/6	11.8"	52mm	2.5x2.2"	8.5 oz.
1129	35mm AI	f1.4-f16	Auto	62°	9/7	11.8"	52mm	2.7x2.9"	14.4 oz.
1128	35mm AI	f2-f22	Auto	62°	8/6	11.8"	52mm	2.5x2.4"	9.9 oz.
1127	35mm AI	f2.8-f22	Auto	62°	6/6	11.8"	52mm	2.5x2.1"	8.5 oz.

*Information to be announced

Normal Nikkor Lenses

Product No.	Focal Length	Aperture Range	Diaphragm	Angle of View	No. of Elements/Groups	Minimum Focus	Filter Size	Dimensions: $\phi \times$ Length	Weight
1133	50mm AI	f1.4-f16	Auto	46°	7/6	17 7"	52mm	2.5x1.9"	9.2 oz.
1136	50mm AI	f2-f16	Auto	46°	6/4	17 7"	52mm	2.5x2.0"	7.8 oz.
1138	55mm AI	f1.2-f16	Auto	43°	7/5	19.7"	52mm	2.8x2.3"	14.5 oz.

Telephoto Nikkor Lenses

Product No.	Focal Length	Aperture Range	Diaphragm	Angle of View	No. of Elements/Groups	Minimum Focus	Filter Size	Dimensions: $\phi \times$ Length	Weight
1151	85mm AI	f2.0-f22	Auto	28° 30'	5/5	33.5"	52mm	2.5x2.4"	5.2 oz.
1156	105mm AI	f2.5-f32	Auto	23° 20'	5/4	39.4"	52mm	2.6x3.1"	15.3 oz.
1159	135mm AI	f2-f22	Auto	18°	6/4	51.2"	72mm	3.2x4.1"	30.3 oz.
1162	135mm AI	f2.8-f32	Auto	18°	5/4	51.2"	52mm	2.5x3.6"	15.2 oz.
1160	135mm AI	f3.5-f32	Auto	18°	4/4	51.2"	52mm	2.6x3.5"	14.1 oz.
1165	180mm AI	f2.8-f32	Auto	13° 40'	5/4	70.9"	72mm	3.2x5.6"	29.3 oz.
1167	200mm AI	f4-f32	Auto	12° 20'	5/5	78.7"	52mm	2.7x5.0"	19.0 oz.
1170	300mm AI	f4.5-f22	Auto	8° 10'	6/5	13.0'	72mm	3.1x8.0"	40.2 oz.

ED-Nikkor Telephoto Lenses for direct camera mounting

Product No.	Focal Length	Aperture Range	Diaphragm	Angle of View	No. of Elements/Groups	Minimum Focus	Filter Size	Dimensions: $\phi \times$ Length	Weight
1298	300mm ED	f2.8-f32	Manual	8° 10'	6/5	13.0'	122mm	4.9x9.9"	5.7 lbs.
1172	300mm ED/AI	f4.5-f22	Auto	8° 10'	6/4	13.0'	72mm	3.1x7.9"	2.4 lbs.
*	400mm ED/AI	f3.5-f22	Auto	6° 10'	8/6	14.0'	41mm Behind lens	4.9x10.4"	5.7 lbs.
1174	400mm ED/AI	f5.6-f32	Auto	6° 10'	5/3	16.4'	72mm	3.3x10.4"	3.1 lbs.
*	600mm ED/AI	f5.6-f22	Auto	4° 10'	7/6	18.0'	41mm Behind lens	4.9x15.0"	5.5 lbs.
*	800mm ED	f8-f32	Auto**	3°	9/7	32.8'	122mm	5.2x18.1"	8.4 lbs.

*Information to be announced

**Stop-down exposure measurement

Nikkor Lenses Technical Specifications

400-1200mm Tele-Nikkor Lenses (require separate Focusing Mount)

Product No.	Focal Length	Aperture Range	Diaphragm	Angle of View	No. of Elements/Groups	Minimum Focus	Filter Size	Dimensions: ø x Length	Weight
970	400mm	f4.5-f22	Auto**	6° 10'	4/4	16.0'	122mm	5.3x10.8"	4.2 lbs.
972	600mm	f5.6-f22	Auto**	4° 10'	5/4	35.0'	122mm	5.3x10.8"	5.3 lbs.
1292	600mm ED	f5.6-f22	Auto**	4° 10'	5/4	35.0'	122mm	5.3x11.0"	5.1 lbs.
973	800mm	f8-f64	Auto**	3°	5/5	61.0'	122mm	5.3x20.0"	5.1 lbs.
1294	800mm ED	f8-f64	Auto**	3°	5/4	61.0'	122mm	5.3x19.6"	6.4 lbs.
974	1200mm	f11-f64	Manual	2°	5/5	141	122mm	5.3x28.8"	6.8 lbs.
1296	1200mm ED	f11-f64	Manual	2°	5/4	165'	122mm	5.2x28.6"	8.2 lbs.

**Stop-down exposure measurement

Reflex Nikkor Lenses

Product No.	Focal Length	Aperture Range	Diaphragm	Angle of View	No. of Elements/Groups	Minimum Focus	Filter Size	Dimensions: ø x Length	Weight
950	500mm	f8	Fixed	5°	5/3	13.0'	39mm Behind lens	3.7x5.6"	2.2 lbs.
952	1000mm	f11	Fixed	2° 30'	5/5	25.0'	Built-in	4.7x9.5"	4.2 lbs.
978	2000mm	f11	Fixed	1° 10'	5/5	59.1	Built-in	10.3x23.5"	38.6 lbs.

Zoom Nikkor Lenses

Product No.	Focal Length	Aperture Range	Diaphragm	Angle of View	No. of Elements/Groups	Minimum Focus	Filter Size	Dimensions: ø x Length	Weight
1180	28-45 mm AI	f4.5-f22	Auto	74°-50°	11/7	23.6"	72mm	3.0x3.6"	15.5 oz.
*	35-70 mm AI	f3.5-f22	Auto	62°-34°20'	10/9	39.4"	72mm	3.0x4.0"	19.4 oz.
1181	43-86 mm AI	f3.5-f22	Auto	53°-28°30'	11/8	47.2"	52mm	2.6x3.4"	15.9 oz.
1182	50-300mm AI	f4.5-f22	Auto	46°-8° 10'	20/13	8.2'	95mm	3.9x11.5"	5.1 lbs.
1184	80-200mm AI	f4.5-f32	Auto	30°10'-12°20'	15/10	5.9'	52mm	3.0x6.4"	28.9 oz.
1285	180-600mm ED	f8-f32	Auto**	13°40'-4°10'	18/11	8.2'	95mm	4.1x15.9"	7.6 lbs.
1086	200-600mm	f9.5-f32	Auto**	12°20'-4°10'	19/12	13.0'	Series 9	3.5x15.0"	5.3 lbs.
1287	360-1200mm ED	f11-f32	Auto**	6°50'-2°	20/12	19.7'	122mm	4.9x27 7"	15.7 lbs.

*Information to be announced

**Stopdown exposure measurement

Micro Nikkor Lenses and Special Nikkor Lenses

Product No.	Focal Length	Aperture Range	Diaphragm	Angle of View	No. of Elements/Groups	Minimum Focus	Filter Size	Dimensions: ø x Length	Weight
1140	55mm Micro AI	f3.5-f32	Auto	43°	5/4	9.5"	52mm	2.6x2.5"	8.3 oz.
1154	105mm Micro AI	f4-f32	Auto	23° 20'	5/3	18.5"	52mm	2.9x4.1"	17.6 oz.
1022	28mm PC	f4-f22	Manual	74°	10/8	11.8"	72mm	3.1x2.7"	14.1 oz.
1026	35mm PC	f2.8-f32	Manual	62°	8/7	11.8"	52mm	2.6x2.6"	11.8 oz.
920	45mm GN	f2.8-f32	Auto	50°	4/3	31.5"	52mm	2.5x1.2"	6.0 oz.
*	58mm Noct AI	f1.2-f16	Auto	40° 50'	7/6	19.7"	52mm	2.9x2.5"	17 1 oz.
980†† 981	200mm Medical	f5.6-f45	Auto	12° 20'	4/4	13.2"	38mm	3.1x7.0"	24.7 oz.

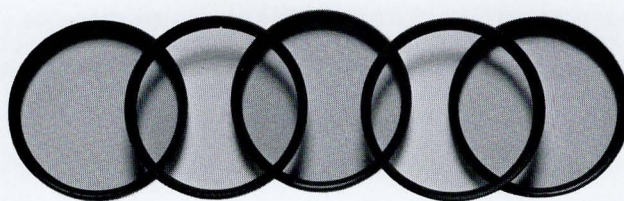
*Information to be announced

††980, with AC Outfit; 981 with DC Outfit

All specifications subject to change without notice.

Nikon Lens Accessories

Crafted to the most exacting quality standards, each Nikon filter is made of the finest optical glass, ground, polished, and hard-coated on each surface for maximum reflection prevention. The 52mm ultraviolet filters, types L37C and L1BC skylight, are multilayer coated via the exclusive Nikon Integrated Coating technique for increased light transmission and freedom from flare. Each Nikon filter is designed for freedom from striation, stress, or other flaws which can degrade image quality. Nikon 52mm, 72mm, 95mm, and 122mm-diameter filters are double-threaded for use in combinations when desired. Supplied with storage cases.



Nikon Filter Selector

For Use with	Filter	Designation	Factor		Screw-In					Drop-In Series 9
			Day.	Tung.	39mm	52mm	72mm	95mm	122mm	
Color or B/W Film	Skylight	L1A	1	1			2275			
	Skylight	L1B	1	1	2246	2401	2412			
	Skylight	L1BC	1	1		2402	2413			
	Ultraviolet	L37C L37	1 1	1 1	2226	2399	2411			
	Ultraviolet	L39	1	1			2271	2287	2283	2450
	Polarizing	Pol.	2-4	2-4		2250	2300			
	Neutral Density	ND-2	2	2	2318					
		ND-2.5	2.5	2.5	2218					
		ND-3.2	3.2	3.2	2225					
		ND-4	4	4	2258	2243	2410			
		ND-5	5	5	2276					
		ND-6.3	6.3	6.3	2288					
		ND-8	8	8	2319	2244				
Color Film	Light Amber (81A)	A2	1.2	1.2	2239	2266				
	Deep Amber (85)	A12	2	2	2256	2264				
	Dark Amber (85B)		2	2		2261				
	Light Blue (82A)	B2	1.2	1.2	2240	2235				
	Med. Blue (80C)	B8	1.6	1.6	2241	2267				
	Deep Blue (80B)	B12	2.2	2.2	2242	2268				
	Red	CC30R	1 7	1 7		2265				
B/W Film	Lt. Yellow (Y1)	Y44	1.5	1		2295				
	Med. Yellow (Y2)	Y48	1 7	1.2		2229	2270	2284	2280	2451
	Deep Yellow (Y3)	Y52	2	1.4	2251	2296				
	Orange (O2)	O56	3.5	2	2253	2231	2274	2285	2281	2452
	Red (R2/25A)	R60	6	5	2259	2249	2273	2286	2282	2453
	Lt. Green	X0	2	1 7		2297				
	Deep Green	X1	5	3.5		2230				
Accessories	Plastic Filter Case (Repl.)					2291	2292	2298		2292
	Leather Filter Case (Repl.)								2299	
	Filter Pouch CA-1 (Holds 6 filters)					2307				
	Leather Case/Polarizer					2293				
	Series 7 Adapter Ring					536				
	Gelatine Filter Holder for 3x3" Filters					2278	2279			

Nikon Lens Accessories

Nikon Lens Hoods

Provide optimum protection against flare caused by extraneous light; individually computed for specific Nikkor lens types. Snap-on hoods attach directly to Lens or Nikon filters, may be reversed over lens for convenient storage; rubber hoods screw into filter mount, fold back to permit camera or lens case to be closed when hood is attached.



Nikon Lens Hood Selector

	Screw-In		Snap-On		Screw-In Rubber		Slip-On	
	Model	Prod. No.	Model	Prod. No.	Model	Prod. No.	Model	Prod. No.
18mm f4	HN-15	542*						
20mm f3.5	HN-9	523						
20mm f4	HN-14	520						
24mm f2.8	HN-1	508						
28mm f2	HN-1	508						
28mm f2.8	HN-2	509						
28mm f3.5	HN-2	509						
28mm f4 PC	HN-9	523						
35mm f1.4	HN-3	510						
35mm f2	HN-3	510						
35mm f2.8	HN-3	510						
35mm f2.8 PC	HN-1	508						
45mm f2.8 GN	HN-4	525						
50mm f1.4			HS-9	543	HR-1	537		
50mm f2			HS-2	515	HR-1	537		
55mm f1.2	HN-6	528	HS-3	511	HR-2	538		
55mm f3.5	HN-3	510						
58mm f1.2 f2	HN-6	528						
85mm f1.8 f2	HN-7	514						
105mm f2.5	HN-8	513	HS-8	522**				
105mm f4 Micro	HN-8	513	HS-8	522				
105mm f4 Bellows	HN-8	513	HS-8	522				
135mm f3.5	HN-8	513	HS-8	522				
500mm f8 Reflex	87mm	530**						
1000mm f11 Reflex							108mm	532**
28-45mm f4.5 Zoom							HK-1	505 ¹
35-70mm f3.5 Zoom							HK-1	505 ¹
43-86mm f3.5 Zoom	HN-3	510						
50-300 f4.5 Zoom	HN-11	529						
80-200mm f4.5 Zoom	HN-7	514						
200-600mm f9.5 Zoom	HN-10	616*						
For 52mm Polarizer	HN-12	518						
For 72mm Polarizer	HN-13	539						

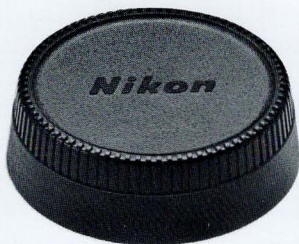
*Also serves as series 9 filter retaining ring

**Replacement

¹Accepts lens hood case CK-1 Prod. No. 506.

All specifications subject to change without notice.

Nikon Lens Accessories



Nikon Lens Caps

Replacement front and rear caps are available for all Nikkor lenses. Please consult Nikon Price List for details.

Nikon Lens Cases



Leather and Leatherette Cases

Durable, hard lens cases, velveteen-lined for maximum protection. Larger cases equipped with shoulder strap for convenient carrying.



Soft Pouch Cases

Flexible pouches of black leatherette for most wide-angle, normal, and telephoto Nikkors. Excellent protection at moderate cost.



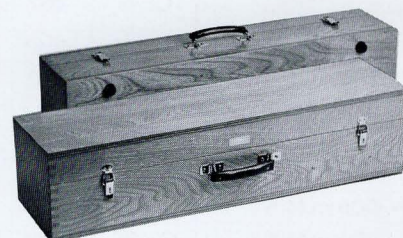
Plastic Cases

Two-piece plastic storage cases; lower section has bayonet mount, screws into upper section.



Leatherette Camera/Lens Cases

Hold any Nikon or Nikkormat body with 50-300mm or 200-600mm lens attached. With shoulder strap. (Cases for Nikon and Nikkormat cameras with other zoom and telephoto lenses attached are also available; see 'Eveready and Compartment Case' pages.)



Wooden Cases

Hold Nikkor 400mm, 600mm, 800mm, or 1200mm ultra-telephoto lenses with Focusing Mount and Nikon/Nikkormat body attached. Felt-lined for maximum protection.

Nikon Lens Accessories

Nikon Lens Case Selector

	Hard Leather/ Leatherette Lens Case		Soft Pouch Lens Case		Plastic Lens Case		Leatherette Camera/Lens Case		Wooden Camera/Lens Case		Metal Lens Case	
	Model	Prod.No.	Model	Prod.No.	Model	Prod.No.	Model	Prod.No.	Model	Prod.No.	Model	Prod.No.
8mm f2.8	CL-11	436*										
10mm f5.6	CL-4	440*										
15mm f5.6	CL-26	483*										
16mm f3.5	CL-31	467	54	400	CP-1	446						
18mm f4	CL-28	456	54	400								
20mm f4	CL-34A	4474	54	400								
20mm f3.5	CL-34A	4474										
24mm f2.8	CL-31	467	54	400	CP-1	446						
28mm f2	CL-31	467	54	400								
28mm f2.8	CL-32	468	54	400								
28mm f3.5	CL-31	467	54	400	CP-1	446						
35mm f1.4	CL-32	468	54	400								
35mm f2	CL-31	467	54	400	CP-1	446						
35mm f2.8	CL-31	467	54	400	CP-1	446						
35mm f2.8 PC		432*	54	400								
45mm f2.8 GN			54	400	CP-1	446						
50mm f1.4	CL-34A	4474	54	400	CP-1	446						
50mm f2	CL-34A	4474	54	400	CP-1	446						
55mm f1.2	CL-34A	4474	54	400	CP-1	446						
55mm f3.5	CL-33	469	55	401	CP-2	447						
58mm f1.2	CL-34A	4474										
85mm f1.8, f2	CL-32	468	55	401	CP-2	447						
105mm f2.5	CL-32	468	55	401	CP-2	447						
105mm f4 Micro	CL35A	4479										
105mm f4 Bellows	CL-31	467	54	400	CP-1	446						
135mm f2	CL-15	452										
135mm f2.8	CL-33	469	55	401	CP-2	447						
135mm f3.5	CL-33	469	55	401	CP-2	447						
180mm f2.8	CL-12	430*	55	401								
200mm f4	CL-13	448	53	402								
300mm f4.5	CL-20A	431										
400mm f4.5	CE-5	450							462			
400mm f5.6	CL-27	458*										
500mm f8 Reflex	CL-23	451*										
600mm f5.6	CE-5	450										
600mm f8									462			
800mm f8 (For focusing unit)	CE-6	457							463			
1000mm f11 Reflex	CL-24	453*										
1200mm f11	CE-7	460							464			
2000mm f11 Reflex												454*
28-45mm f4.5	CL-33A	4469*	55	401								
43-86mm f3.5	CL-32	468	55	401	CP-2	447						
50-300mm f4.5							CE-2	455				
80-200mm f4.5	CL-35	479*										
180-600mm f8	CZ-1860	441										
200-600mm f9.5							CE-3	466				
360-1200 f11	CZ-3612	443										

*For Replacement.

For latest information on cases not listed, please consult most recent Nikon Price List.

All specifications subject to change without notice.

Nikon EI Nikkor Enlarging Lenses



Superior Optics for Superior Enlargements

EI Nikkor enlarging lenses are specifically computed for optimum performance at the most widely-preferred enlargement sizes, according to focal length. Resolving power, contrast, evenness of illumination, and flatness of field far exceed the capabilities of conventional optics and insure that every detail on the negative is transmitted, without aberration, to the print.

EI Nikkor lenses reveal the painstaking care with which all Nikkor lenses are designed. They are corrected for chromatic aberration beyond the visible spectrum into the near-ultraviolet wavelength—to which photographic papers are particularly sensitive, thus insuring against focus shift at every aperture, every magnification. EI Nikkor lenses are especially prized for professional color printing because of their near apochromatic color correction and exceptional contrast—qualities particularly important with single-contrast color emulsions.

Widely employed in graphic arts, cathode-ray tube, and other specialized applications that demand their superior performance, each EI Nikkor is equipped with dual large-numeral aperture scales and click stops for fast, accurate operation and is front-threaded to accept screw-in accessories for special-effects work. All EI Nikkor lenses 50mm-150mm are supplied in universal (39mm) "Leica" thread mount.

EI Nikkor Accessories

Reverse Adapters: For mounting designated lenses in reverse position for optimum performance in reduction prints, and other specialized applications. For 50mm f2.8, Product No. 2641 for 50mm, 75mm f4 and 80mm f5.6, Product No. 2640. A special 40.5mm lens hood is also available for camera use on the 50mm f2.8 EI-Nikkor: Product No. 524.

Product Number	Focal Length	Aperture Range	Angle of View	No. of Elements/Groups	Magnification Optimum-Usable	Largest Format Covered
215	50mm	f2.8-f16	46°	6/4	8x 2x—20x	35mm (24x36mm)
214	50mm	f4.0-f16	46°	4/3	8x 2x—20x	35mm (24x36mm)
95100	63mm	f3.5-f16	46°	6/4	8x 2x—20x	35mm (32x45mm)
216	75mm	f4.0-f45	52°	4/3	5x 2x—10x	2¼x2¼ (56x56mm)
217	80mm	f5.6-f45	57° 40'	6/4	5x 2x—15x	2¼x2¾ (56x72mm)
218	105mm	f5.6-f45	56°	6/4	5x 2x—10x	2¼x3¼ (65x90mm)
219	135mm	f5.6-f45	54°	6/4	5x 2x—10x	4x5 (9x12cm)
220	150mm	f5.6-f45	54°	6/4	4x 2x—8x	4x5 (9x12cm)
95101	180mm	f5.6-f45	54°	6/4	4x 2x—8x	5x7 (13x18cm)
222	210mm	f5.6-f45	54°	6/4	4x 2x—8x	5x7 (13x18cm)
95102	240mm	f5.6-f45	54°	6/4	3x 1x—6x	8x10 (18x24cm)
95103	300mm	f5.6-f45	52°	6/4	2x 1x—4x	10x12 (27x33cm)
95104	360mm	f5.6-f45	50°	6/4	2x 1x—4x	11x14 (30x40cm)

Nikkor Lenses for Large-Format Cameras



While primarily known for the surpassing quality of its 35mm camera lenses, Nikon also enjoys an exceptional reputation in the graphic arts and other specialized fields for its Apo Nikkor and Apo El Nikkor optics. Now, Nikon has applied its unique technological and design ingenuity to bring the same, reliable, superior performance to all large-format cameras. Drawing on more than 220 types of Nikon optical glass and utilizing latest computer techniques, Nikon designers have produced a series of lenses that are unsurpassed in their field.

Nikon offers three new high-performance lens systems for press, view, and technical cameras using 4x5" and larger film sizes, each featuring an exceptionally large image circle for maximum freedom in camera movements. Their resolution, contrast, flatness of field and evenness of illumination are further enhanced by the application of multi-layer Nikon Integrated Coating (IC) for optimum color fidelity, contrast and freedom from flare. Each large-format Nikkor is supplied with a precision leaf shutter incorporating a convenient 'press focus' control as well as cable release socket.

Super-Wide Angle Nikkors 65mm—90mm

Three ultra-fast, 8-element optics ideally suited to the most demanding interior architectural, and scenic photography. The greatly increased speed (as compared to conventional wide-field lenses) significantly aids ease and accuracy in focusing and composition. Their angle of view reaches an exceptionally wide 105° at f22 and smaller apertures.

Wide Angle Nikkors 135mm—210mm

Combine relatively fast speed with superb image quality, even at maximum aperture. Versatile, all-purpose lenses excellent for fashion, commercial, architectural and industrial applications, the longer focal lengths, covering 5x7" format easily, also serve as superior portrait lenses for 4x5" format.

Long Focal Length Nikkors 300mm and 450mm

Developed from the famed Apo-Nikkor optics, to provide resolution, flatness of field, and color correction equivalent to the most demanding photographic or graphic-arts requirements. The 4-element optical system incorporates Nikon multi-layer Integrated Coating for maximum light transmission, image clarity, and freedom from flare.

Nikkor Lenses for Large-Format Cameras

Super-Wide Angle Nikkors

Product No.	1301	1303	1305
Focal Length	65mm	75mm	90mm
Aperture Range	f4—f45	f4.5—f45	f4.5—f64
No. of Groups/Elements	5/8	5/8	5/8
Intended Format *	4x5"	4x5"	5x7"
Angle of View *	105°	105°	105°
Image Circle ϕ *	170mm	200mm	235mm
Shutter Type	No. 0	No. 0	No. 0
Speed Range	T B, 1—1/500	T B, 1—1/500	T B, 1—1/500
Flash Synch	MX	MX	MX
Filter/Accessory Size	77mm	77mm	82mm
Dimensions (Length/ ϕ)	2.7x3.1"	3.0x3.1"	3.3x3.3"
Weight	12.7 oz.	13.9 oz.	18.0 oz.

Wide Angle Nikkors

Product No.	1311	1313	1315	1317
Focal Length	135mm	150mm	180mm	210mm
Aperture Range	f5.6—f64	f5.6—f64	f5.6—f64	f5.6—f64
No. of Groups/Elements	4/6	4/6	4/6	4/6
Intended Format *	4x5"	4x5"	5x7"	5x7"
Angle of View *	70°	70°	70°	70°
Image Circle ϕ *	190mm	210mm	253mm	295mm
Shutter Type	No. 0	No. 0	No. 1	No. 1
Speed Range	T B, 1—1/500	T B, 1—1/500	T B, 1—1/400	T B, 1—1/400
Flash Synch	MX	MX	MX	MX
Filter/Accessory Size	52mm	52mm	67mm	77mm
Dimensions (Length/ ϕ)	1.8x2.1"	2.0x2.1"	2.4x2.8"	2.8x3.1"
Weight	7.1 oz.	8.1 oz.	13.4 oz.	16.8 oz.

Long Focal Length Nikkors

Product No.	1321	1323
Focal Length	300mm	450mm
Aperture Range	f9—f128	f9—f128
No. of Groups/Elements	3/4	3/4
Intended Format **	8x10"	10x12"
Angle of View **	55°	50°
Image Circle ϕ **	325mm	420mm
Shutter Type	No. 1	No. 3
Speed Range	T B, 1—1/400	T B, 1—1/125
Flash Synch	X	X
Filter/Accessory Size	52mm	62mm
Dimensions (Length/ ϕ)	1.7x2.1"	2.2x2.5"
Weight	9.9 oz.	21.2 oz.

* Indicated Values at f22.

** Indicated Values at f9.

All specifications subject to change without notice.

Cine Nikkor Lenses



Cine Nikkors are specially designed for use with cameras that accept interchangeable, standard C-mount lenses. This includes not only 16mm motion picture cameras but also closed circuit TV cameras using a 1" vidicon tube. Both these photographic areas involve enormously large image magnification during projection and therefore require uncommonly high optical quality, especially when used for critical industrial measurements and research applications.

Cine Nikkor lenses, with their superior resolving power and color correction, more than meet these exacting requirements. In fact, in CCTV applications, their resolution usually exceeds that of the system itself, assuring highest possible image quality. They are available in five focal lengths, from 10mm wide angle to 100mm telephoto, each offering excellent speed in addition to its other advantages.

Convenient, Positive Operation

Cine Nikkors are designed not only for superior optical performance but for fast, easy handling as well. They can be rotated on the camera to bring the various markings into convenient viewing position during camera operation. Lens barrels are finished in satin black with white markings for clear legibility. Aperture control rings feature positive click stops at all standard f-numbers throughout the full range of each lens. Control rings are located in similar positions on all lenses to facilitate operation when using several focal lengths, and outer diameters as well as attachment sizes are identical for all. Full protection is assured by snap-on or screw-in lens caps.

Easy Mounting on Camera

All Cine Nikkors are fitted with standard C mounts, making them readily interchangeable on most 16mm motion picture cameras and on television cameras equipped with 1" vidicon tubes. After screwing the lens into the camera mount or turret, the barrel may be pushed towards the camera and rotated to position the control markings for greatest viewing convenience.

Other Applications

In addition to 16mm motion picture and TV photography, other specialized applications may require precise reproduction of small format sizes. Because of their exceptionally fine correction in all areas, Cine Nikkors are perfectly suited for such work.

Accessory Lens Hoods

A standard (single size) screw-in lens hood fitting all Cine Nikkors is available as an accessory. Two or three lens hoods may be combined for maximum protection against stray light with longer focal length lenses. When several lenses are mounted on a turret-type camera, hood combinations may have to be limited to prevent their projecting into fields of view of shorter lenses on turret. Combinations for 3-lens turret are shown below. Cine Nikkor Lens Hood, Product No. 382.

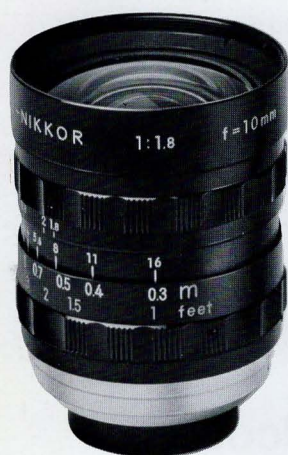
Basic Lens	No. of Hoods When Used Alone	Other Lenses Mounted (without hood)				
		10mm	13mm	25mm	50mm	100mm
10mm f1.8	None		None	None	None	Do not Combine
13mm f1.8	None	None		None	None	Do Not Combine
25mm f1.4	One	None	None		One	Do Not Combine
50mm f1.8	Three	None	None	Two		Do Not Combine
100mm f2.8	Two	Do Not Combine			One	

F-C Lens Mount Adapter

Permits the use of Nikon system F-mount lenses on C-mount cameras. Makes a wide variety of high-resolution optics beyond the longest (100mm) Cine Nikkor available for 16mm motion picture and 1" vidicon applications. Product No. 2360.

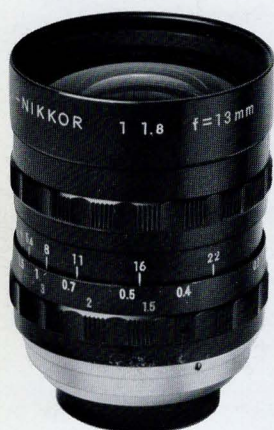
Cine Nikkor Lenses

10mm f1.8 Cine Nikkor



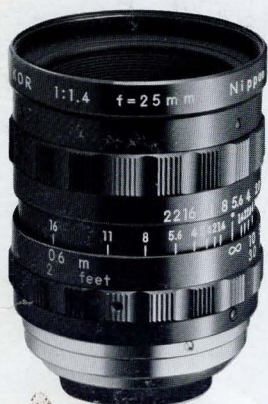
Focal length 10mm
Aperture range: f1.8 to f22
No. of Elements/Groups: 10/9
Correction wavelength range: 400—700mm
Picture angle: 64° 30'
(74° with 1" vidicon)
Vignetting 0% (at f2.6)
Distance scale: In meters and feet, from 0.3m (1 ft.) to infinity
Image size: 16mm motion picture film and 1" vidicon format
Weight: 145 g (5.10 oz.)
Diameter: 42mm (1.65")
Length: 57mm (2.24")
Rear mount: C mount
(25.4mm/1" 1/P = 32)
Attachment size: 40.5mm
(P = 0.5mm)
Product No. 385

13mm f1.8 Cine Nikkor



Focal length 13mm
Aperture range: f1.8 to f22
No. of Elements/Groups: 8/7
Correction wavelength range: 400—700mm
Picture angle: 51° 40'
(60° with 1" vidicon)
Vignetting: 0% (at f2.5)
Distance scale: In meters and feet, from 0.3m (1 ft.) to infinity
Image size: 16mm motion picture film and 1" vidicon format
Weight: 150g (5.28 oz.)
Diameter: 42mm (1.65")
Length: 57.45mm (2.26")
Rear mount: C mount
(25.4mm/1" 1/P = 32)
Attachment size: 40.5mm
(P = 0.5mm)
Product No. 386

25mm f1.4 Cine Nikkor



Focal length 25mm
Aperture range: f1.4 to f22
No. of Elements/Groups: 7/5
Correction wavelength range: 400—700mm
Picture angle: 28°
(33° 22' with 1" vidicon)
Vignetting: 0% (at f2.8)
Distance scale: In meters and feet, from 0.6m (2 ft.) to infinity
Image size: 16mm motion picture film and 1" vidicon format
Weight: 140g (4.93 oz.)
Diameter: 42mm (1.65")
Length: 57mm (2.24")
Rear mount: C mount
(25.4mm/1" 1/P = 32)
Attachment size: 40.5mm
(P = 0.5mm)
Product No. 388

50mm f1.8 Cine Nikkor



Focal length 50mm
Aperture range: f1.8 to f22
No. of Elements/Groups: 4/4
Correction wavelength range: 400—700mm
Picture angle: 14° 20'
(17° with 1" vidicon)
Vignetting. 0% (at f2.9)
Distance scale: In meters and feet, from 1m (0.3 ft.) to infinity
Image size: 16mm motion picture film and 1" vidicon format
Weight: 175g (6.16 oz.)
Diameter: 42mm (1.65")
Length 52.5mm (2.07")
Rear mount size: C mount
(25.4mm/1" 1/P = 32)
Attachment size: 40.5mm
(P = 0.5mm)
Product No. 390

100mm f2.8 Cine Nikkor



Focal length. 100mm
Aperture range: f2.8 to f22
No. of Elements/Groups: 5/3
Correction wavelength range: 400—700mm
Picture angle: 7° 10'
(8° 30' with 1" vidicon)
Vignetting 0% (at f3.6)
Distance scale: In meters and feet, from 1.2m (4 ft.) to infinity
Image size: 16mm motion picture film and 1" vidicon format
Weight: 210g (7.39 oz.)
Diameter: 42mm (1.65")
Length: 89.5mm (3.52")
Rear mount: C mount
(25.4mm/1" 1/P = 32)
Attachment size: 40.5mm
(P = 0.5mm)
Product No. 392

All specifications subject to change without notice.