

REFLEX NIKKOR LENSES

Reflex-Nikkor lenses—500mm, 1000mm and 2000mm in focal length—are a combination of mirror and lens elements. They are based on design principles used in large astronomical telescopes. Incoming light is reflected twice on the mirror surfaces, resulting in compactness of the lens barrel and light weight relative to their focal lengths. The physical lengths of these lenses are less than half of their focal lengths.

The 500mm f/8 Reflex-Nikkor weighs about 1kg, the 1000mm 1.9kg and the 2000mm 7.5kg.

These lenses are effective for scientific applications, sports, natural life and in isolating architectural details.

To adjust image brightness, neutral density or other filters are used, because the Reflex-Nikkor lenses are not equipped with diaphragms.

To compensate for minute displacement of focus caused by temperature changes, the focusing ring on each Reflex-Nikkor lens may be turned beyond the infinity marking.

Sharpness of the focused image is unsurpassed because of the use of reflecting surfaces which do not cause any chromatic aberration. This eliminates the need for the infrared mark on the focusing distance scale.

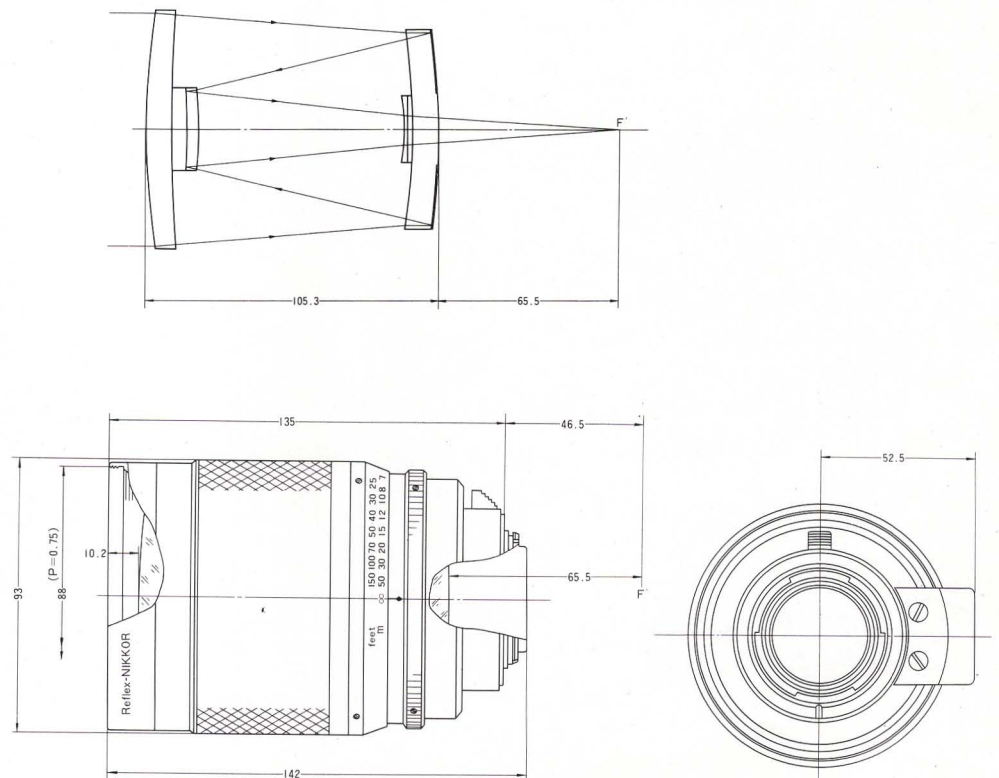
Taken with this type of lens, the subjects in the out-of-focus range may appear as blurred rings or separated blurred lines.

The remarkably compact and lightweight 500mm Reflex-Nikkor, based on the ingenious catadioptric design, may be hand-held for shooting. It measures only 142mm long, less than one-third its focal length, and weighs 1kg. It may be easily carried anywhere for sports, wildlife or photojournalism picture shooting.

The 500mm f/8 excels its predecessor, the Reflex-Nikkor f/5, by giving greater depth of field and reduction of the size of the blurred rings in the out-of-focus areas, while slightly sacrificing lens speed.

This lens may be focused as close as 4 meters (magnification ratio of about 1:7). Used on a tripod, the camera may be changed to either a vertical or horizontal format by pushing on the knurled spring catch at the rear of the lens.

Focal length:	500mm
Maximum aperture:	1 : 8
Lens construction:	5 elements in 3 groups
Picture angle:	5°
Distance scale:	Graduated both in meters and feet up to 4m and 13ft
Attachment size:	88mm (P=0.75)
Filter:	39mm screw-in
Dimensions:	93mm dia. X 142mm length (3-21/32 in. X 5-19/32 in.)
Weight:	1 kg (2.2 lb)
Accessories:	91mm slip-on leather front cap (109-05-026), rear cap type F (108-00-401), 88mm screw-in lens hood (109-05-030), leather lens case (109-05-028)



(m/m)

This is a very compact, lightweight super telephoto lens of the catadioptric type. Despite its 1000mm focal length, overall length is only 238mm. It weighs 1.9kg.

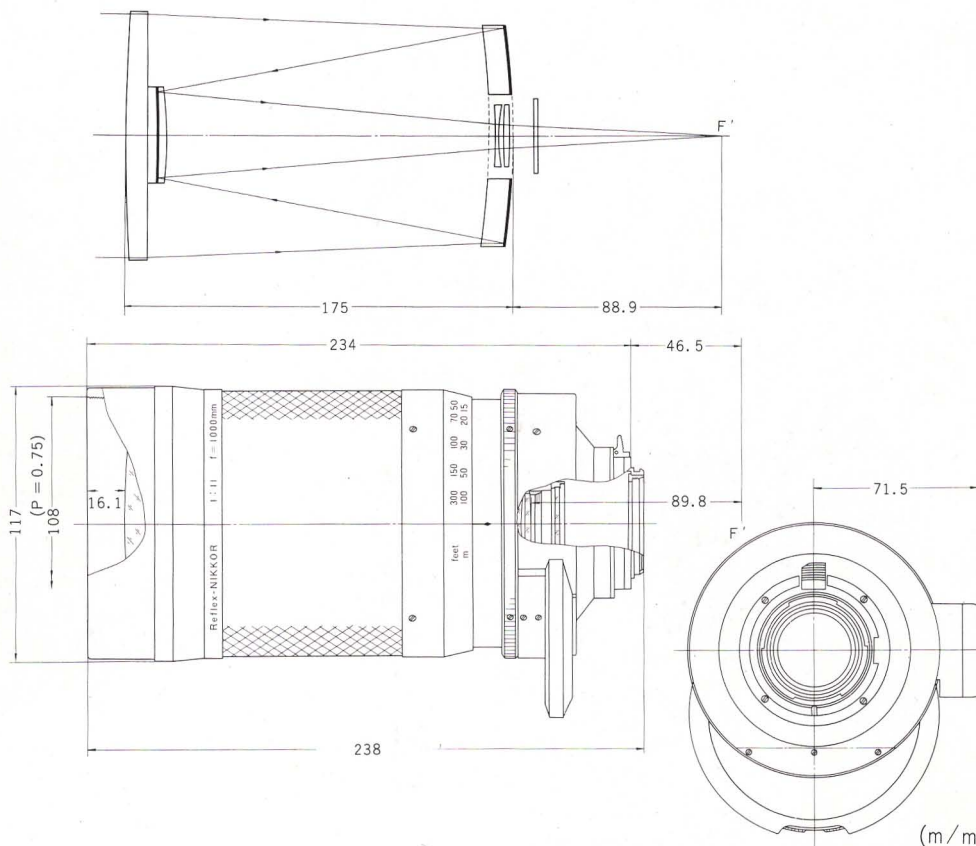
All aberrations, particularly chromatic aberration, have been well corrected. This gives high resolution and good contrast, with very sharp picture results. The ring-shaped blurs in the out-of-focus areas in a picture are minimized due to the great depth of field.

The lens may be focused to very close 8 meters (25 feet), an outstanding feature of this lens.

Four filters (L39, Y48, O56 and R60) are included in a rotating filter wheel built into the rear of the lens. When the lens is mounted on a tripod, the camera body can be turned to either the vertical or horizontal picture format.

This lens system excels in nature studies in the field and in capturing sports action under ideal light conditions.

Focal length:	1000mm
Maximum aperture:	1 : 11
Lens construction:	5 elements in 5 groups
Picture angle:	2°30'
Distance scale:	Graduated both in meters and feet up to 8m and 25ft
Attachment size:	108m (P=0.75)
Filter:	Built-in, L39, Y48, O56 and R60
Dimensions:	117mm dia. X 238mm length (4-19/32 in. X 9-3/8 in.)
Weight:	1.9 kg (4.2 lb)
Accessories:	115mm slip-on leather front cap (109-05-027), rear cap type F (108-00-401), 108mm slip-on lens hood (109-05-052), leather lens case (109-05-029)



This Reflex-Nikkor has the longest focal length—2000mm—among all Nikkor telephoto lenses. Magnification is 40 times that of a normal 50mm lens, with the angle of view $1^{\circ}10'$.

It is of the catadioptric type, with two mirrors and three lenses, which accounts for its fairly compact size. The lens barrel is 598mm long.

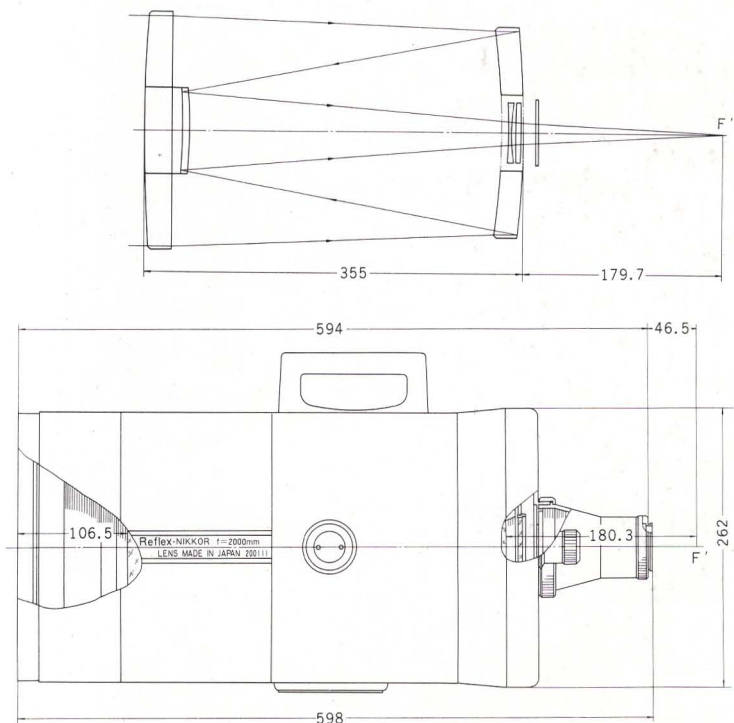
Three rotations of a focusing knob will suffice to focus this 2000mm telephoto lens from infinity to 20 meters, the closest range. The focusing knob is located at the right-hand side of the rear end of the lens barrel. Distances appear in a glass-covered window above the knob.

This lens features four built-in filters—L39, Y48, O56 and R60—which move into the optical path at the turn of the knob.

The carrying handle incorporates a peepsight to help the photographer pre-spot his subject.

The lens mount rotates with click-stops to permit selection of the vertical or horizontal picture format. Other features include a rubber-ringed lens hood built onto the lens and two tripod sockets (one for regular 1/4 in. and the other for 3/8 in. size tripods). A special mounting permits this heavy lens to be turned and tilted readily.

Focal length:	2000mm
Maximum aperture:	1 : 11
Lens construction:	5 elements in 5 groups
Picture angle:	$1^{\circ}10'$
Focusing:	By means of the focusing knob. In three rotations, covers ∞ —20m (∞ —60ft)
Distance scale:	Graduated both in meters and feet up to 20m and 60ft
Attachment size:	254mm
Filter:	Built-in, L39, Y48, O56 and R60
Dimensions:	262mm dia. X 598mm length (10-5/16 in. X 23-17/32 in.)
Weight:	17.5kg (38.6 lb)
Accessories:	Slip-on front cap, rear lens cap type F (108—00—401), mounting for turning/tilting (108—04—603), wooden case (108—04—303)
(Mounting)	
Angle of elevation:	60°
Angle of depression:	35°
Horizontal turning:	Endless
Dimensions:	573mm high X 330mm wide (22-9/16 in. X 13 in.)
Weight:	7.5kg (16.5 lb)



(m/m)