

# Nikon FILTERS

Nikon

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## TYPES OF FILTERS

Nikon Filters are divided into five groups:

- (1) sharp cut filters (from L39 to R60) which cut off shorter wavelength region of light ranging from 300m $\mu$  to 950m $\mu$ ,
  - (2) correction filters used with panchromatic film,
  - (3) color temperature compensation filters,
  - (4) neutral density filters which reduce uniformly the light amount over the whole range of wavelength,
  - (5) polarizing filters used for eliminating reflecting light from the subject.
- L1A (skylight), L39 (UV), ND (neutral density) and Polar (polarizing) filters are used for both color and black-and-white films.  
A2, A12 (amber), B2, B8, B12 (blue) filters are exclusively for color film.  
The other filters are only for black-and-white film.

As the filter is used at all times inserted into the optical path, it should have optically perfect plane-parallel surfaces, and should not be subjected to any strain caused by the frame.

Nikon Filters, made of solid glass and produced by scrupulous grinding and polishing, will satisfactorily meet these requirements. They are anti-reflection coated on both sides.

Table I TYPES AND USES OF Nikon FILTERS

Type	Designation	Filter factor		Similar to Kodak Filter	Use	
		Daylight	Tungsten light			
Skylight	L1A	1	1	1A	It is a drawback of color film that blue is apt to stand out extremely. This filter has the effect of cutting off blue to bring about natural tone. Also cuts off haze.	
Ultra-violet	L39	1	1	2B	Completely absorb ultra-violet light invisible to the human eyes. Have no effect on any other visible light. Cut off haze. Multiplying factor being nearly 1, they are suitable for general use, if more clear-cut result is desirable. Also serve to protect the lens.	
Yellow	Light	Y44	1.5	1	K1 K2 K3 Absorb moderately ultra violet, violet and blue light, thus properly darkening the sky in the landscape. Light yellow filters are suitable for producing natural tone in snap shots and portraits. As the color deepens, the filter factor number increases, and the effect advances accordingly.	
	Medium	Y48	1.7	1.2		
	Deep	Y52	2	1.4		
Orange	O56	3.5	2	23A	Their wider absorption range than that of yellow filters will produce further prominent contrast. Bring out bright image of any subject in which yellow, orange or red is prevailing. Quite effective in reproducing textures of wood, stone, sculptures or the like in detail.	
Red	R60	6	5	A	Present the most striking contrast and accentuate the distant scene. Red and orange particularly come out bright. Sometimes used to produce night effects by under-exposure. With infra-red film, infra-red photography is possible.	
Green	Light	X0	2	1.7	X1	Special filters which absorb ultra-violet, blue and red, partially or completely. Care should be taken of the color balance, because of their nature to turn down both blue and red simultaneously. Produce almost the same light and shade effects from each color as what the human eyes see. Quite suitable for portraits and multi-colored subjects in general. X1 filter is used in photographing with electric light to keep red tint of the subject from standing out too bright.
	Deep	X1	5	3.5	X2	
Polarizing	Polar	2-4	2-4	Polar	Eliminating various degrees of reflecting light such as from glass, water or tile surface, it is useful for taking picture through glass window or under water. Ineffective for metal surfaces, because little polarization takes place.	
Neutral Density	ND1 $\times$	4	4	ND	Subdue all colors uniformly. Required in photographing extremely bright subject or when the lens is used at a large aperture to minimize the depth of field, to shade off the background, or to avoid the reduction of resolution caused by stopping down the lens aperture. Applicable to both black-and-white and color films as the filter itself has no color.	
	ND8 $\times$	8	8			
	ND10 $\times$	10	10			
	ND100 $\times$	400	400			
Amber	Light	A 2	1.2	81A	To avoid blue tinge which is likely to occur in taking picture using daylight film in the shade, cloudy weather or indoors at the window facing north in fair weather.	
	Deep	A12	2	85	To obtain the correct color rendition in outdoor photography in fair weather using tungsten light film, since the filters reduce blue tinge.	
Blue	Light	B 2	1.2	82A	To prevent red-yellow tint which is unavoidable in twilight (3 hours or so before sunset or after sunrise) in using daylight film.	
	Medium	B 8	1.6	80C	To eliminate excessive red-yellow tone when exposing daylight film with clear bulb flash.	
	Deep	B12	2.2	80B	To avoid red-yellow tint caused by using reflector lamp (photo flood lamp) indoors, in using daylight film.	

### CAUTION IN USING

- Before using, be sure that both surfaces are cleaned free from dust, finger prints, water drops or the like.
- As the diameter and thickness of filter have an influence on the degree of vignetting, use only one filter at a time.
- The polarizing filter, designed to rotate around the optical axis, is to be used at the position where the least reflection appears on focusing screen image. However, the rangefinder camera such as Nikon SP which has no such viewing screen, will offer some difficulty in using the polarizing filter.

### SIZES OF FILTERS

Nikon Filters are available either in screw-in or drop-in type, the former is screwed directly into the lens front and the latter is put under the lens hood or attached to the lens by means of an adapter ring and insert ring.

- Under two or more lights of different color temperatures, it is not possible to balance the color by the use of the filter.
- No color balancing filter should be used under the fluorescent light, generally available on the market. Use only the fluorescent light exclusively designed for color photography.
- The multiplying factors in the table should be taken as approximate guides. In practice, where a light source of different quality or a film of different type is used, a slightly different factor may be applied.

Table II Nikon FILTERS AVAILABLE

Type of Filter	Attach-ment Size	NIKKOR Lenses to Be Used (or Camera) focal length / F-number				Filter (○ = Available)																					
		In Nikon F Mount	In Nikon S Mount	In Screw (Leica) Mount	In Other Mount	LIA	L39	Y14	Y48	Y52	O56	R60	X 0	X 1	Polar	ND4×	ND8×	ND10×	ND100×	A 2	A12	B 2	B 8	B12			
Screw-in	34.5mm	105/4	105/4, Micro-NIKKOR	25-4, 28-3.5, 35-2.5, 35-3.5, Micro-NIKKOR	NIKKOREX 8 Conversion	○	○	○	○					○		○	○	○	○								
	40.5mm		50/2	50/2	NIKKOREX Zoom 8 NIKKOREX 35 (I, II) NIKKOREX Auto 35 16mm Cine NIKKOR NIKKOREX 8F Zoom Conversion																						
	43 mm	135/4 (for Bellows)	28-3.5, 35-1.8, 35-2.5, 35-3.5, 50-1.4, 135-3.5, 135/4 (for Bellows)	35-1.8, 50-1.4, 135/3.5																							
	48 mm		85/2	85/2																							
	52 mm	21/4, 24/2.8, 28/2, 28/3.5, PC-NIKKOR, 35/1.4, 35/2, 35/2.8, GN Auto NIKKOR, 50/1.4, 50/2, 55/1.2, Micro-NIKKOR, Micro-NIKKOR Auto, Micro-NIKKOR-P Auto, 85/1.8, 105/2.5, 135/2.8, 135/3.5, 200/4, 1000/6.3, 43-86 Zoom, 80-200 Zoom, 105/4 Bellows	105/2.5	105-2.5	Nikon super Zoom-8 NIKKOREX Zoom 35 16mm Cine Zoom NIKKOR NIKONOS	○	○	○	○	○	○	○	○	○	○	○	○	○	○			○	○	○	○	○	
	62 mm		50/1.1	50/1.1																							
	72 mm	20/3.5, 180/2.8, 300/4.5			NIKKOREX Auto 35 Conversion	○	○		○		○																
	95 mm	50-300 Zoom																									
	122 mm	400/4.5, 600/5.6, 800/8, 1200/11																									
	Drop-in	Series	85-250 Zoom, 200-600 Zoom,																								
I X		180/2.5, 250/4, 350/4.5	180/2.5, 250/4, 350/4.5																								

For Reflex NIKKOR 500/5, 500/8 and 1000/11 exclusively designed filters are available.

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