

Filters are normally utilized for lenses in the transmission of light possessing specified wavelengths under various degrees of control, as may be required. The filters serve to adjust the spectral characteristics of light passing through the lens.

Sunlight, fluorescent, strobe, flash lamps, etc., including all visible rays which are discernible with the human eye, also contain certain ultraviolet and infrared rays not visible to the naked eye; although the degree involved may well differ, depending upon the light utilized. Without some means of control, all photographic films, with the exception of infrared films, are not sensitive to infrared rays—but will react to ultraviolet rays at times—may result in unpleasant effects or results to photographic efforts; thus, the UV filter is utilized to absorb the ultraviolet rays. However, the majority of filters are so designed in order to absorb ultraviolet rays, in addition to their originally intended functions. A UV filter may also be utilized for the protection of all lenses, and it is recommended that a UV filter be left on the lens at all times, regardless of whether or not B&W or color film is used.

Recommended use of filters; refer also, to the Operating Manual of the Pentax 6 × 7 SLR, for additional details.

TYPES & SIZES OF PENTAX 6 × 7 FILTERS

Type Size	UV	Y 2	O 2	R 2	YG	LENS USED
67 mm	⊙ ⊙ ● ●	⊙ ⊙ ● ●	⊙ ● ● ●	⊙ ● ● ●	⊙ ● ● ●	90mm, 105mm, 150mm, 200mm, Macro 135mm
77 mm	⊙ ⊙ ● ●	⊙ ⊙ ● ●	⊙ ● ● ●	⊙ ● ● ●	⊙ ● ● ●	55mm f/4, 400mm, 600mm, 800mm, Reflex 1000mm
82 mm	⊙ ⊙ ● ●	⊙ ⊙ ● ●	⊙ ● ● ●	⊙ ● ● ●	⊙ ● ● ●	75mm, Shift 75mm, 300mm, 45mm
95 mm	⊙ ⊙	⊙ ⊙	⊙	⊙		500mm
100 mm	⊙ ⊙ ● ●	⊙ ⊙ ● ●	⊙ ● ● ●	⊙ ● ● ●	⊙ ● ● ●	55mm f/3.5
Type Size	SKYLIGHT	CLOUDY	MORN & EVE			LENS USED

- ⊙ SMC filters for B/W films ⊙ SMC filters for color films ● Single-coated filters for B/W films
● Single-coated filters for color films

EXPOSURE COMPENSATION FACTOR

Exposure compensation is not required when the TTL Penta Prism Finder is used on the Pentax 6 × 7 cameras, since all exposure factors pertinent to the filter in use, is automatically adjusted in the viewfinder. However, when an ordinary finder—lacking a TTL exposure meter (incorporated)—is utilized, compensation should be controlled manually; by adjusting either the aperture value or the shutter speed mode.

The "mired" unit (microreciprocal degree) noted in the Color temperature conversion column, corresponds to the value of $\frac{1}{\text{Col. temp.}} \times 10^6$, and the + (plus) designation indicates the degree to lower the color temperature; adding to the yellow-reddish tone, and the - (minus) mark, to raise the said color temperature—thereby, adding to the bluish tinge. The degree of compensation is proportionate to the value of "mired."

Filter Exposure Factor

Type	Filters for B&W films					Filters for Color films		
	UV	Y 2	O 2	R 2	YG	SKYLIGHT	CLOUDY	MORN & EVE
Color	Nearly colorless	Yellow	Orange	Red	Yellow-Green	Light pink	Light brown	Light blue
Exp. factor	Approx. 1 ×	2 ×	3 ×	6 ×	2 ×	1 × (+)	1.5 ×	1.5 ×
Color temp. conversion							+34 mired	-33 mired

FILTER ATTACHMENT

Out of the wide variety of Pentax filters for 6 × 7 SLR use, the 95mm diameter filters consist of the threaded-in or threaded type, and the 77mm's are available in two types; threaded and with the simple bayonet mount. Others, the 67mm, 82mm, and the 100mm diameter filters adopt the bayonet type mounting. All the lenses with the 67mm filter threading are capable of accepting the ordinary 67mm threaded type filters (available for Pentax 35mm SLR use lenses), however, in the event the threaded type filters are used; as in the case of the 150mm, 200mm, or the 135mm Macro, the exclusive lens

hood cannot be attached over the filter. When a lens hood is required over the filter, for photo-taking, the bayonet mounting filter is recommended—for coupling with the lens hood.

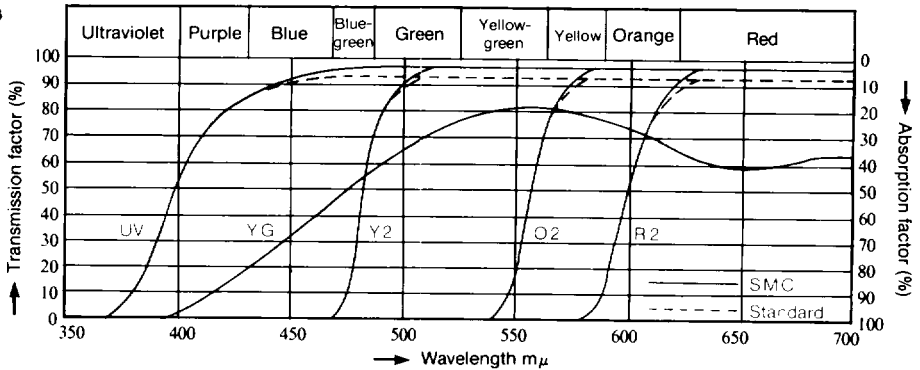
In utilizing a bayonet mount filter, align the white dot found on the lens rim, with an identical marking on the filter, and position the two catches on the filter rim into place. Then, rotate clockwise for an approximate 1/6th turn, for a firm fixing in place.

RECOMMENDED CARE OF FILTERS

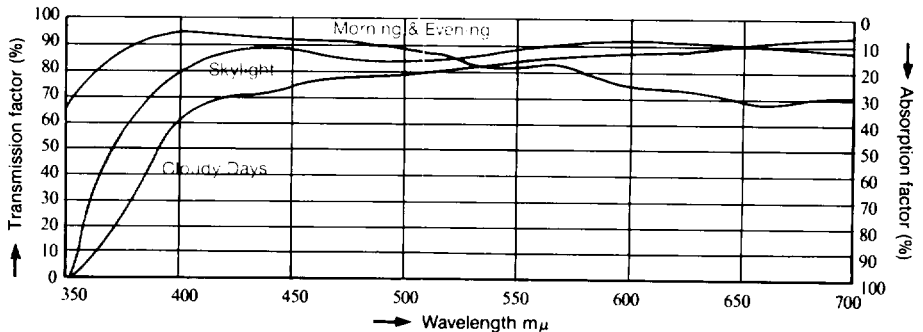
- It is recommended that a single filter be used at a time to avoid possible unsatisfactory results. All Pentax filters currently available are designed to produce the best results, particularly in terms of spectral characteristics, when used singly. The placing of one or more filters over another at the same time, will only serve to produce an extremely poor result, without positive gains; it may also, at times, cause a severe vignetting condition at the four corners of the picture area or image.
- Proper care should be observed in attaching the threaded type filters onto the lens. Excessive force in either screwing or unscrewing the threaded filters onto the lens component may cause undue difficulties—especially during the removal process. The same caution should be observed when attaching a threaded lens hood into the filter itself—for the same reasons.

PENTAX FILTERS—SPECTRAL TRANSMISSION FACTOR

Filters for B&W films



Filters for color films



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