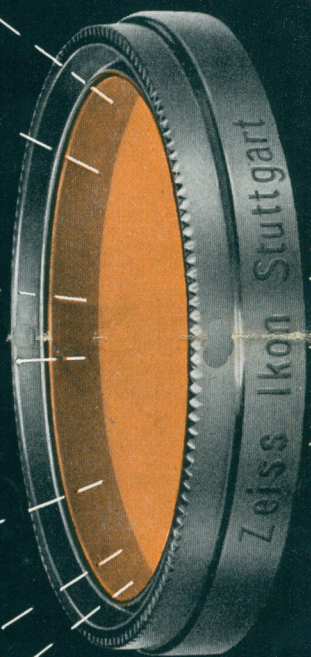


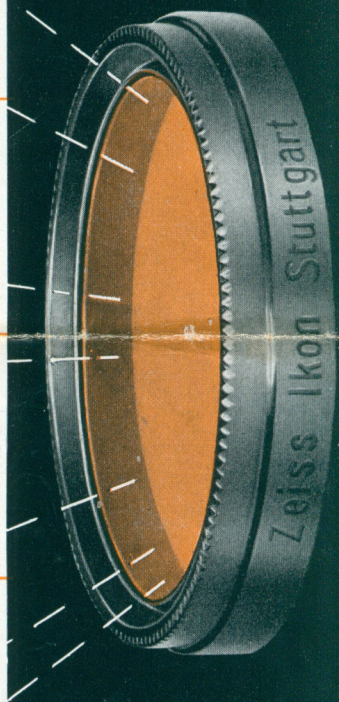
Why and when to use filters ?



Why and when to use

filters ?

FILTER	SUITABLE FOR	FILM	Filter Factor
Yellow	Landscapes Seaside pictures Portraits taken against the blue sky	Orthochromatic and orthopanchromatic films	2
Yellow-green	Subjects in spring and summer with much green Still life Reproduction of paintings	Orthopanchromatic and panchromatic films	2
Orange	Pictorial effects with colours Distant views without foreground	Orthopanchromatic and panchromatic films	5
Red	Any increase of contrast for certain pictorial effects	Orthopanchromatic and panchromatic films	8
UV	Pictures taken in a bluish atmosphere, when the sky is cloudless or partly cloudy, or when it is overcast with high thin clouds. For all pictures taken in the mountains	All types of film	1



Why and when to use ZEISS IKON filters?

Some amateur photographers still believe they need no filters when using modern film and, as a rule, they do without these accessories. However, they are amazed to see the improvement in many winning pictures made with the help of colour filters. As a matter of fact, even in our advanced state of photographic development we cannot do without filters if we want to make the most of our pictures and do full justice to the subject.

Unlike colour film, all ordinary film renders the objects in black and white. Even the best panchromatic film will render certain colours in a shade different to that perceived by the human eye. Yellow and red affect the sensitive layer of the film much less than blue. On a landscape picture, for instance, made without a filter, the outlines of clouds will be blurred. There will be little difference in shade between the blue of the sky and the white of the clouds.

The use of filters will improve the rendering of colours in shades of grey on black and white films. Yellow filters and yellow-green filters will help to render correctly the tones and tints of the colours, while orange and red filters are only used for special purposes and pictorial effects. The use of filters always necessitates an increase of the exposure time. This increase of exposure is expressed in terms of filter factors, as shown below. They are valid for good colour-sensitive film and for normal lighting conditions. Deviations which might be necessary because of the light tints of colours in the morning and the evening need not be considered; they are within the exposure latitude of a good film.

ZEISS IKON precision filters are made of optical glass coloured in the mass. They are immune from external influences such as temperature or moisture. Their surfaces are perfect optical planes. The filters are available with screw-on and slip-on mounts for all standardized lensmounts. Because of their superior quality ZEISS IKON filters ensure first class photographic results.

A yellow filter is suitable for films of normal sensitivity and is especially useful for rendering the sky darker so that the outlines of the clouds become clearer. Since a yellow filter also assists haze penetration it is most useful when taking distant views.

A yellow-green filter in conjunction with orthopanchromatic films of normal sensitivity renders the shades of green brighter and more correctly. This filter is chiefly used for sunny spring or summer landscapes as well as for reproduction of coloured objects.

The orange filter renders the sky considerably darker than it is in reality. This filter is preferably used if the tones are to be exaggerated in order to produce a certain light effect, i.e. a certain "mood". It is also useful for reproductions if light contrasts are to be enhanced.

The red filter is used for obtaining special effects. Using orthopanchromatic films, contrasts in shades can be exaggerated with a red filter to such a degree that amazing pictorial effects can be achieved. In particular, red filters add much to the clearness of distant views.

The ultraviolet filter: When the sky is cloudless or partly clouded as well as when it is covered with very thin, light clouds drifting at very high altitudes, the atmosphere contains a considerable amount of diffused ultraviolet rays (completely invisible) and blue light, to which the photographic emulsion is most sensitive. Under such lighting conditions a bluish haze seems to veil the

object in the distance. Ultraviolet rays are also predominant in the mountains, because at higher altitudes the atmosphere is too thin to cut out these short-wave light rays as it does in lower regions.

The ultraviolet filter is to absorb this excess of ultraviolet rays. In doing so it increases the sharpness and brilliance of pictures and may also be used in cases where a yellow filter cannot be used as for instance for sports photographs for which any filter factor is undesirable as well as for colour pictures in which the use of a yellow filter would bring out unnatural colours.

When using an ultraviolet filter the exposure need not be increased.

Polarizing filters - named "Bernotar Polarizing Filters" after Professor Bernauer - are used in order to neutralize or eliminate reflections from mirrors or polished surfaces such as glass, paintings, furniture, water, glossy paper, and plastics etc. The effect of the polarizing filter depends entirely on its position in regard to the reflecting surface. The proper position is easily found by looking at the object through the polarizing filter. This filter will also lend saturated colours to all colour photographs.



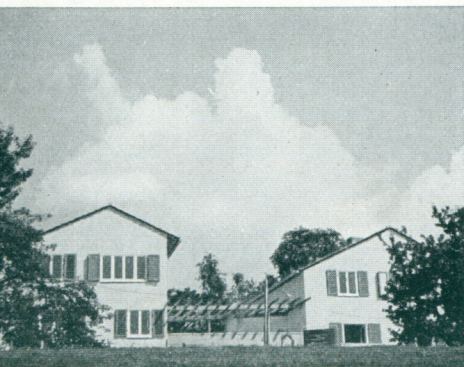
Without polarizing filter



With polarizing filter

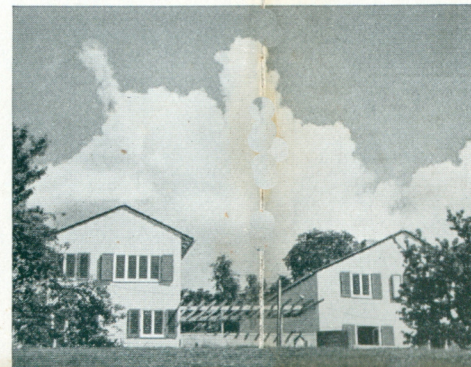
Without filter

The sky is rendered too brightly with no clear outlines of the clouds



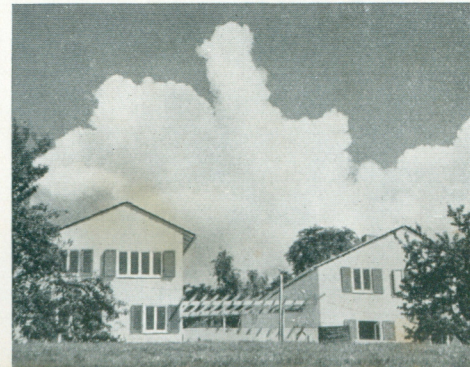
With yellow filter

Sky and clouds are rendered in tones as perceived by the eye



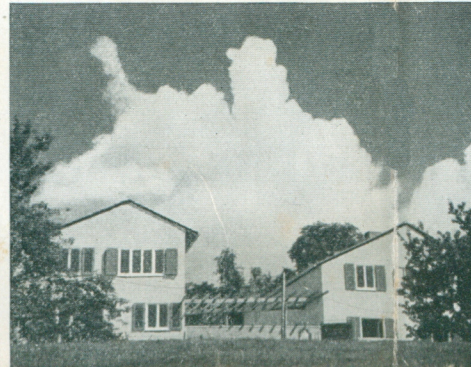
With yellow-green filter

Good rendering of blue sky; green rendered in lighter tones



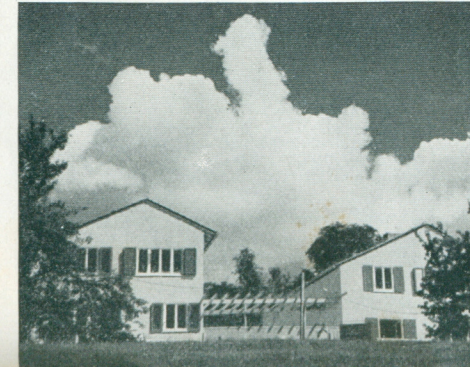
With orange filter

Clearer outlines of white clouds on blue sky



With red filter

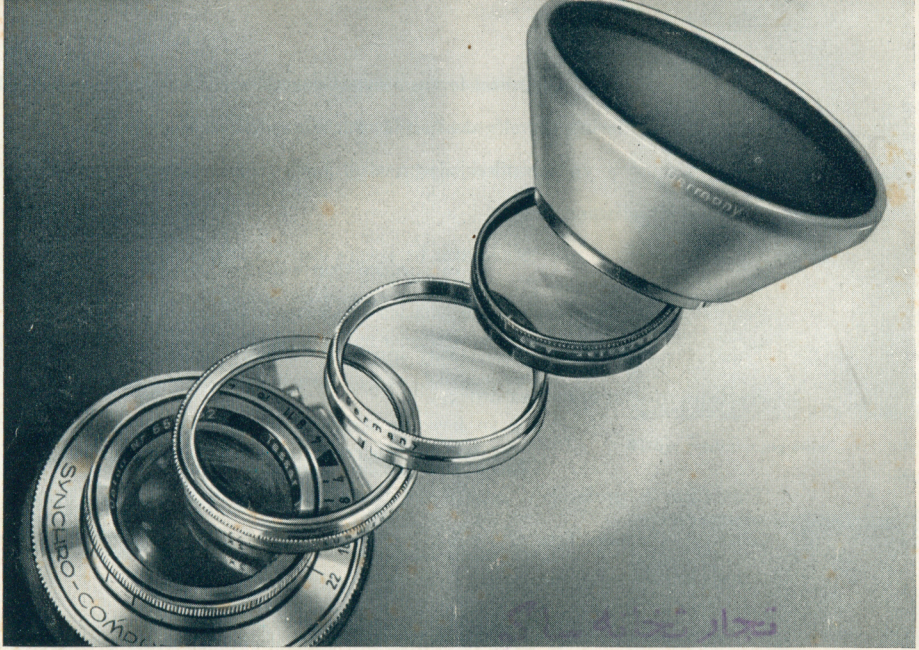
Still further increase of contrast between blue sky and clouds, rendering a mood like an approaching thunderstorm



With ultraviolet (UV) filter

for greater sharpness of pictures at altitudes above 4,500 feet.





Prices of ZEISS IKON precision filters Trading House

The filters are available with screw-on, screw-in and slip-on mounts for all standardized lenses. The colour of the filters is engraved on the mounts. All filters are supplied in practical, transparent plastic cases. ZEISS IKON filters can be used together with appropriate supplementary lenses (ZEISS Proxar lenses) and the ZEISS IKON sunshade.

Screw-on filters

Colour	Suitable for camera lenses with screw mounts				
	27 mm	35,5 mm	40,5 mm	49 mm	77 mm
Yellow	cat. no. 352/G	cat. no. 353/G	cat. no. 354/G	cat. no. 383/G	cat. no. 384/G
Yellow-green	352/GR	353/GR	354/GR	383/GR	384/GR
Orange	352/O	353/O	354/O	383/O	384/O
Red	352/R	353/R	354/R	383/R	384/R
Ultraviolet	352/UV	353/UV	354/UV	383/UV	384/UV

Special filters for IKOFLEX I, Ia, II, IIa: cat. no. 371

Slip-on filters

Colour	Suitable for camera lenses with slip-on mounts		
	32 mm	37 mm	42 mm
Yellow	cat. no. 349/G	cat. no. 322/G	cat. no. 325/G
Yellow-green	349/GR	322/GR	325/GR
Orange	349/O	322/O	325/O
Red	349/R	322/R	325/R
Ultraviolet	349/UV	322/UV	325/UV

Bernotar polarizing filters in leather case

for slip-on mounts, diameter:	32 mm	37 mm	42 mm	51 mm
Bernotar	cat. no. 330	cat. no. 331	cat. no. 332	cat. no. 333

Special filter for IKOFLEX I, Ia, II, IIa: Twin-lens polarizing filter IKOPOL: cat. no. 337



ZEISS IKON AG. STUTTGART