



# The Professional Photo SourceBook

# Section 8

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# INTRODUCTION

## FILTERS

### Expand Your Vision With Filters

If you are serious about photography (and especially if you take pictures for a living), you want as much control as possible over your images. Filters are essential tools that provide control over the quality of the image that appears on your negative or transparency. Filters are also used as an addition to the creative photographer's palette.

A well-chosen filter can not only correct a multitude of problems on location or in the studio, it can also change the overall look of a scene and the nature of the final work from a literal depiction to an interpretive, even abstract, creation.

There are a few basic principles that will help you choose and use the right filter for any given situation.



*Lindahl EFX 3 x 3" Drop-In Filters*

In Black and White photography, different colored filters block different parts of the color spectrum, causing changes in contrast and tonal relations. Depending on which filter you use and how deep the color is, these changes can be dramatic. For example, two colors side-by-side may be rendered identical shades of gray — even contrasting colors like red and blue. Yet, if you use a red filter, the red will be rendered much lighter, while the blue becomes a darker shade of gray. Using filters intended for black and white photography with color film can also have dramatic, but very different, effects.

Skylight and UV filters offer more subtle image control. Photographic films are more sensitive to ultraviolet light than our eyes are. A blue haze may appear in photographs taken when there is excessive UV light. A UV filter can reduce atmospheric haze when it is caused by blue radiation and ultraviolet. Since our eyes cannot see this part of the spectrum, UV filters, also known as skylight or haze



*Hitech 4x4" Color Graduated*

filters, are recommended for all outdoor shooting. In Color photography, you can add a lightly-colored filter to enhance an already-dominant color, to add a color that isn't there, or to create a mood. You can also change the mood of a photo by using a fog filter, which will make even the sunniest scene look like it is in deep fog. Or use a graduated filter to subtly smooth out the difference in brightness between the sky and the ground. Graduated filters are available in different degrees of intensity and are available in colors, as well. Most graduated filters are available in rectangular shapes, so you can control which part of the "fade" you want to emphasize by moving the filter across the lens.

When shooting indoors, use of a Fluorescent filter will turn the yellow-green hues that film sees under this kind of light into more natural-looking tones. Similarly, filters are available to turn the orange light that comes from a tungsten light source into a daylight-balanced look.

Both color and black and white film can benefit from the use of polarizers. A polarizer can dramatically darken the sky, or greatly reduce reflections off of translucent surfaces like water or glass by partially blocking polarizing light vibrations.



*Screw-In Filters*

# INTRODUCTION

## FILTERS

Use special effects filters to bring a new dimension to your work. Prism filters can multiply your subject within the frame; starburst filters will add dramatic Hollywood glamour effects. New generations of these filters, like **B+W's** Spectra and **Tiffen's** Hollywood FX filters, offer an even more dramatic look. And you can create flattering portraits and smooth out your subjects when doing portrait work by using soft-focus filters like those offered by Hoya.

Screw on filters may be the most common, but if that's all you use, you've barely discovered the great variety of filter shapes and sizes that are available.

Which you use will vary depending on your needs and working habits.

Typically, round screw-on lenses for still photography are available in sizes from 30.5mm to 82mm; video filters can be as large as 122mm. Some Nikon and Canon Telephoto lenses use smaller filters that are

dropped into the rear of the lens, while Hasselblad lenses accept filters that have a bayonet-type mount (bayonet 50 lenses are designed for older model lenses, while bayonet 60 lenses will fit the newer models). But sometimes screw-on filters won't cut it for fast-working pros or anyone who uses the same filters on a variety of lenses - with a variety of filter size requirements.

Several filter holder systems are available, each with distinct advantages.

The main overall advantage is that filters can be easily slipped in and out of the holder, saving critical time when in the middle



*Kalt Drop-In Filter Holder*

of a shoot. The filters are primarily square or rectangular and are made of glass (less scratchable), resin (doesn't break), or flexible material (wide variety of filter types available, in more sizes).

The key to the Cokin Creative Filter System is its adapter ring, which attaches to the front of the lens and holds a square resin-coated filter. Two sizes are available: A, a 3x3 filter, designed primarily for 35mm lenses; and P, a 4x4 version that is especially well-suited for medium-format cameras.

Hitech filters are designed for professional photo and video use. The 4x4 resin filters are 1.5mm thick and fit most holders. A range of adapters makes them usable on 35mm to 8x10 cameras. Hitech filters have cut corners to avoid scratches and make handling easier. Lee features removable filter guides that let you decide which combination of filters - from gels to 4mm thick - would be most suitable for your needs. The holder rotates, allowing you to make the most of filter effects.

Lindahl offers Ultra Effects Filters, designed to fit in the rear slot of pro lens hoods. The filters are mounted in a square 3x3" holder which is easy to handle and remove, eliminating worries about fingerprints.

Kodak, Lee and Optiflex Flexible filters offer a wide variety of finely calibrated color compensating options - an essential ingredient when exposure, color temperature and balance are critical. Flexible filters offer the widest variety of filter types and can be used in all major filter holders.

Invest in some new filters and expand your vision!



Today, filters are an integral part of the multifaceted photographic process. They can alter light to create desired moods, give colors a new vibrancy, enhance contrast, balance light to film, and make visible that which is invisible to the eye. Special effect filters become creative tools which allow full expression of the photographer's imagination. Filters fulfill the diverse needs of the most demanding professional

photographers and meet the high standards of still-photography, video and precision technology. B&W filters use German Schott optical glass and brass mounting rings. B&W, a division of of Schneider Optics, benefits the photographer and videographer with a half century of experience in the high quality filter manufacturing field.

B+W FILTERS AND CODES			
SIZE	CODE	SIZE	CODE
30.5mm	30.5	49mm	49
35.5mm	35.5	52mm	52
37mm	37	55mm	55
39mm	39	58mm	58
39mm Rear for Nikon	MC39N	60mm for Leica	60
40.5mm	40.5	62mm	62
43mm	43	67mm	67
46mm	46	72mm	72
48mm	48	77mm	77

B+W FILTERS AND CODES			
SIZE	CODE	SIZE	CODE
82mm	82	Bay 1 Rollei	B1
86mm	86	Bay 2 Rollei	B2
95mm	95	Bay 3 Rollei	B3
105mm	105	Bay 6 Rollei	B6
112mm	112	Series 5.5	S5.5
122mm	122	Series 7	S7
135mm	135	Series 8	S8
Bay 50 Hass	B50	Series 9	S9
Bay 60 Hass	B60	Pro Speed fits Lindhal	PS

### Sky and Ultraviolet (UV) Filters

The Sky and Haze filters are wise initial investments. They help to protect your valuable front lens from dust, moisture and scratches, with no light loss. If desired, they can be left on the lens at all times for protection. They also provide additional benefits of correction for Ultraviolet (UV) light, which can register on film and videotape as a bluish cast and can obscure distant details. Ultraviolet filters allow you to correct for the UV effect to varying degrees.

It is important to distinguish between atmospheric UV-haze and haze created by smog and pollution. Smog and pollution are comprised of opaque particles that absorb visible light, as well as UV light and will not be appreciably affected by a UV filter.

**Skylight KR-1.5 (1A) Filter**  
A general use filter. It absorbs a significant amount of UV light to ensure sharper detail and is lightly tinted for better colors. Contrast is slightly increased.  
*Item #.....BWSL( )*

**UVa Haze 010 (2C) Filter**  
Can be used at all times. Improves color rendition and eliminates dullness caused by ultraviolet radiation. The filter reduces distant haze.  
*Item #.....BWUV( )*

**Strong UV 415 (2B) Filter**  
Absorbs ultraviolet light. Recommended in mountains or areas with clear air. Produces realistic gray tones when used with black and white film.  
*Item #.....BW415( )*

**Very Light Yellow 420 (2E) Filter**  
Absorbs ultraviolet light. Used when a very light yellow filter is desired. It is used for aerial photography with black and white films.  
*Item #.....BW420( )*

*To order B+W filters, just insert filter diameter (FILTER SIZE in charts below) after the item number of filter desired.*

### PRICES FOR SKY AND ULTRAVIOLET (UV) FILTERS

FILTER SIZES:	30.5	35.5	37	39	39N	40.5	43	46	48	49	52	55	58	60	62	67	72	77
Skylight KR 1.5	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00	21.00	32.00	28.00	30.00	40.00	44.00
UV Haze 010	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00	21.00	32.00	28.00	30.00	40.00	44.00
Strong UV 415	33.00	-	44.00	44.00	65.00	37.00	36.00	34.00	34.00	31.00	35.00	38.00	43.00	68.00	50.00	61.00	85.00	95.00
Very Lt Yellow 420	33.00	-	44.00	44.00	65.00	37.00	36.00	34.00	34.00	31.00	35.00	38.00	43.00	68.00	50.00	61.00	85.00	95.00

FILTER SIZES:	82	86	95	105	112	122	B50	B60	B1	B2	B3	B6	S5.5	S7	S8	S9	PS
Skylight KR 1.5	58.00	72.00	101.00	116.00	133.00	147.00	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
UV Haze 010	58.00	72.00	101.00	116.00	133.00	147.00	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
Strong UV 415	114.00	112.00	166.00	182.00	211.00	232.00	71.00	110.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	-
Very Lt Yellow 420	114.00	112.00	166.00	182.00	211.00	232.00	71.00	110.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	-

## P O L A R I Z E R F I L T E R S

### Polarizer Filters

Polarizer filters are one of the most useful filters for creating beautiful photographic images. Polarizers let you deepen and intensify blue skies, achieve vibrant color saturation, reduce or eliminate glare and reflections from non-metallic objects and glass surfaces, and minimize haze in both color and black-and-white photography. The polarizers can be rotated to determine the amount of reflection to be removed. When photographing scenics, rotate the polarizer to change the blue sky densities from light to dark blue. Creates dramatic contrast between blue skies and white clouds.

There are two types of Polarizers - the standard linear polarizer and the circular polarizer. The linear polarizer is used with many cameras, while the circular polarizer is used on cameras with beam splitting metering systems commonly found on automatic SLR and autofocus

cameras. Check your camera manual for the metering system employed. A circular polarizer can be effectively used with all cameras. Standard linear polarizers are not effective on cameras with split beam metering.

You can, in all cases, see the effect through the filter. If you are not using an automatic camera or have your camera on manual setting, both filters require that you open up the lens from 1½ to 2 f-stops.

Polarizers can be combined with other filters to maximize special effects. By combining two or more linear polarizers, the light can be almost totally blocked. The effect can be up to 2 to 4 f-stops. Light absorption through this method is stepless and is a fusion of the position of the two polarizers in relation to each other. This effect is especially interesting for soft-dissolves in motion pictures and videography.

#### Top Polarizer (Linear)

Linear polarizers are used with most manual focus SLR and rangefinder cameras to increase color saturation and reduce reflections. The neutral gray color and plane parallel polarizer material guarantee optimal image results.

Item #.....BWP( )

#### Circular Polarizer

For use with auto-exposure and auto-focus SLR and video cameras. It does not influence the metering systems of these cameras.

Item #.....BWCP( )

#### Kaesemann Linear Polarizer

Crafted from selected polarizer foils and specially prepared optical glass. This neutral polarizer is edge sealed and is, therefore, durable under extreme climactic conditions, such as humidity and heat. The use of this filter is recommended for the most stringent imaging requirements, especially with fast telephoto lenses and apochromatic lenses.

Item #.....BWKP( )

#### Kaesemann Circular Polarizer

Same as above, but circular.

Item #.....BWKCP( )

#### Warm Tone Linear Polarizer

This unique filter combines the advantages of a polarizer and a skylight filter. It brings together the advantages of both filters in color photography, while producing impressive photographs with not only vibrant colors but also a very pleasing warm tonal quality.

Item #.....BWWP( )

#### Warm Tone Circular Polarizer

Same as above, but circular.

Item #.....BWWCP( )

**To order Polarizer filters, just insert filter diameter (FILTER SIZE in charts below) after the item number of filter desired.**

### PRICES FOR POLARIZER FILTERS

FILTER SIZE:	30.5	37	39	40.5	43	46	48	49	52	55	58
Top Polarizer	-	-	-	38.00	38.00	36.00	36.00	30.00	31.00	34.00	37.00
Circular Polarizer	63.00	76.00	58.00	76.00	71.00	66.00	60.00	56.00	58.00	65.00	66.00
Kaesemann Linear Polarizer	63.00	76.00	67.00	76.00	71.00	76.00	67.00	74.00	78.00	89.00	92.00
Kaesemann Circ Polarizer	-	-	77.00	85.00	80.00	86.00	85.00	88.00	91.00	101.00	104.00
Warm Tone Lin Polarizer	-	-	-	-	-	86.00	88.00	74.00	102.00	116.00	119.00
Warm Tone Circ Polarizer	-	-	-	-	-	97.00	101.00	93.00	127.00	128.00	138.00

FILTER SIZE:	60	62	67	72	77	82	86	95	105	112	122
Top Polarizer	-	42.00	47.00	57.00	62.00	91.00	106.00	135.00	150.00	-	-
Circular Polarizer	75.00	70.00	86.00	94.00	107.00	-	186.00	-	-	-	449.95
Kaesemann Linear Polarizer	102.00	96.00	114.00	126.00	142.00	164.00	174.00	197.00	222.00	392.00	514.00
Kaesemann Circ Polarizer	128.00	111.00	133.00	148.00	168.00	204.00	207.00	227.00	252.00	346.00	548.00
Warm Tone Lin Polarizer	128.00	126.00	141.00	154.00	182.00	204.00	207.00	224.00	252.00	-	-
Warm Tone Circ Polarizer	154.00	140.00	165.00	180.00	205.00	236.00	227.00	247.00	252.00	272.00	-

FILTER SIZE:	B50	B60	B1	B2	B3	B6	S5.5	S7	S8	S9
Kaesemann Linear Polarizer	124.00	219.00	83.00	89.00	99.00	264.00	64.00	70.00	99.00	144.00
Kaesemann Circ Polarizer	139.00	226.00	107.00	115.00	127.00	329.00	78.00	90.00	129.00	208.00

### Filters for Black and White Film

*The number enclosed in brackets [#] indicates the comparable Kodak Wratten filter number.*

**Light Yellow 021 [3]** Filter  
Accentuates warm, soft, delicate scenes through enhancement of yellow, orange and red. Recommended for sports photography and landscape work, especially when the sun is positioned low.  
**Item # .....BW021( )**

**Medium Yellow 022 [8]**  
Creates subtle differences between green tones and enhances the natural rendition of the sky. Recommended for landscape and foliage. Gray values are faithfully reproduced.  
**Item # .....BW022( )**

**Dark Yellow 023 [9]**  
Further increases the effects described above. Contrast increases, clouds appear more pronounced, haze is diminished and distance vision is improved.  
**Item # .....BW023( )**

**Yellow-Orange 040 [16]**  
Adds 3-dimensional quality and contrast to landscape photography. On black and white prints it will render blues darker, while lightening yellows and reds.  
**Item # .....BW040( )**

**Red Orange 041 [22]**  
Creates a strong darkening of the sky, dramatic thunder storm-like cloud reproduction and strongly enhanced shadows, due to its enhanced contrast. Also achieves good tonal differentiation in still-life photography by brightening yellow, orange and red.  
**Item # .....BW041( )**

**Yellow Green 060 [11]**  
Ideal for scenes where it is important to differentiate the green tonal values. The application is especially suited to landscape photography in the springtime, because it enhances the light green color of the leaves. Due to its favorable effect on red tones, this filter is also suitable for portraits or group pictures taken in natural light.  
**Item # .....BW060( )**

**Green 061 [13]**  
This dark green filter creates differentiation of green tones in late spring and summer. It is also recommended for floral pictures that are used graphically, for tonal separations in still-life photography and for the correction of red tones in portraits with high-speed film.  
**Item # .....BW061( )**

**Light Blue 080**  
Recommended for the correction of artificial light with overtones of yellow-red, such as with older photo lamps or normal household bulb illumination. It is also used to darken skintones for portrait photography under natural light.  
**Item # .....BW080( )**

**Medium Blue 081**  
The blue 081 enhances the tonal rendition of the sky by emphasizing mist in valleys and transmitting light rays over water, fog and haze. In addition, this filter is used for the tonal separation in still-life photography and the correction of the light spectrum from artificial light sources.  
**Item # .....BW081( )**

**Light Red 090 [025]**  
Ideal for enhancing contrast. In landscape and architectural photography it enhances white areas - for example, letting clouds stand out clearly against a darkened sky and drastically reducing distant haze. It is also used for tonal separation in still-life photography.  
**Item # .....BW090( )**

**Dark Red 091 [29]**  
The use of this filter gives a surrealistic effect in landscape and architectural photography by producing a "storm-like" cloud effect, "moonlight" effect and "wood" effect. It is indispensable for tonal separation in still-life photography and for the reproduction of documents which have become illegible.  
**Item # .....BW091( )**

### SPECIFICATIONS

	MANUAL ADJUSTMENT INCREASE F-STOP		MANUAL ADJUSTMENT INCREASE F-STOP		MANUAL ADJUSTMENT INCREASE F-STOP
Light Yellow 021	½	Red Orange 041	2	Medium Blue 081	1
Medium Yellow 022	1	Yellow Green 060	1	Light Red 090	2½
Dark Yellow 023	1½	Green 061	1½	Dark Red 091	3
Yellow Orange 040	2	Light Blue 080	½		

*To order Filters for B&W Film, just insert filter diameter (FILTER SIZE in charts on next page) after the item number of filter desired.*



*Different colored filters will change how hues in the photo are rendered on black and white film. Note how the letters, which were all different colors, change radically when shot through different filters. From left: B+W Green 061 (13) filter, Medium Yellow 022 (8), light red 090 (24).*

## F I L T E R S   F O R   B L A C K   A N D   W H I T E

### Filters for Black and White Film, continued

#### FILTERS FOR BLACK AND WHITE FILM

FILTER SIZE:	30.5	35.5	37	39	39N	40.5	43	46	48	49	52	55
Light Yellow 021	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
Medium Yellow 022	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
Dark Yellow 023	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
Yellow Orange 040	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
Red Orange 041	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
Yellow Green 060	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
Green 061	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
Light Blue 080	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
Medium Blue 081	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
Light Red 090	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
Dark Red 091	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00

FILTER SIZE:	58	60	62	67	72	77	82	86	95	105	112	122
Light Yellow 021	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00	147.00
Medium Yellow 022	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00	147.00
Dark Yellow 023	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00	147.00
Yellow Orange 040	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00	147.00
Red Orange 041	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00	147.00
Yellow Green 060	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00	147.00
Green 061	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00	147.00
Light Blue 080	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00	147.00
Medium Blue 081	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00	147.00
Light Red 090	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00	147.00
Dark Red 091	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00	147.00

FILTER SIZE:	B50	B60	B1	B2	B3	B6	S5.5	S7	S8	S9	PS
Light Yellow 021	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
Medium Yellow 022	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
Dark Yellow 023	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
Yellow Orange 040	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
Red Orange 041	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
Yellow Green 060	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
Green 061	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
Light Blue 080	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
Medium Blue 081	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
Light Red 090	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
Dark Red 091	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95

## F I L T E R S F O R C O L O R

Color conversion filters balance the spectral composition of the photographic light source to the temperature balance of photographic films. This color temperature is expressed in degrees Kelvin ("K"). High color temperature light becomes blue, while low tends to have a reddish tone. Depending upon the degree of necessary color temperature conversion, reddish to brown or blue-toned, color conversion filters in varying density are required to absorb the predominant color tones of the light.

### Warming Filters

#### SPECIFICATIONS FOR WARMING FILTERS

FILTER	COLOR TEMP CORRECTED FROM → TO	MANUAL ADJ INCREASE F-STOP
81A	3400 K → 3200 K	½
81B	3500 K → 3200 K	½
KR3	3600 K → 3200 K	½
KR6	3900 K → 3200 K	½
KR12	5500 K → 3400 K	¾
KR15	5500 K → 3200 K	¾

#### 81A

This filter balances daylight film for electronic flash. A noticeable warmer color reproduction is produced, which is important for special work, such as art reproductions where true color reproduction is required. Sizes 86-S9 are compound cemented.

Item #.....**BW81A**( )

#### 81B

Slightly stronger than 81A, it makes a stronger color temperature balance possible from artificial light sources - to 3500°, which results in a slightly warmer color reproduction. Sizes 86-S9 are compound cemented.

Item #.....**BW81B**( )

#### KR3 [81C]

This filter is strongly recommended for daylight photographs, especially in spring and summer with cloudless skies and clear air. It helps eliminate the strong blue tone and haziness which is produced by this level of ultraviolet light. Furthermore, it will reduce the unwanted blue tone in shadow areas with an overcast sky.

Item #.....**BWKR3**( )

#### KR6 [81EF]

Daylight with a high percentage of blue (midday in the mountains during the summer) is neutralized by the KR6 in color photos where an extreme blue tone is to be expected. Not only does it block ultraviolet light and reduce blue tones in the shade, but it also penetrates light fog.

Item #.....**BWKR6**( )



#### KR12 [85]

When using the brown-toned KR12 with tungsten-balanced color film, one can photograph in daylight or with flash illumination. This eliminates the strong overall bluish cast.

Item #.....**BWKR12**( )

#### KR15 [85B]

Although the KR15 is used for the same photographic situation as the KR12, this dark brown filter is the better choice when photographing very bluish cast in midday summer.

Item #.....**BWKR15**( )

### Cooling Filters

#### SPECIFICATIONS FOR COOLING FILTERS

FILTER	COLOR TEMP CORRECTED FROM → TO	MANUAL ADJ INCREASE F-STOP
KB1.5	3000 K → 3200 K	¼
KB3	2800 K → 3200 K	¼
KB6	4100 K → 5500 K	½
KB12	3400 K → 5500 K	1½
KB15	3200 K → 5500 K	2
KB20	2600 K → 5500 K	3

#### KB1.5 [82A]

This light blue filter absorbs the excess yellow-red light from daylight in the morning and evening hours. It creates cooler colors and corrects for the warming tendency of some color films. It can also be used as a color balancing filter.

Item #.....**BWKB1.5**( )

#### KB3 [82C]

Corrects the frequent tendency toward reddish tones when using 500ws flood lights with tungsten film. The KB3 is also necessary when using older nitrate photo lamps.

Item #.....**BWKB3**( )

#### KB6 [80D]

This medium blue filter reduces the strong reds of sunrise and sunset. It is used for the optical reduction of extreme yellow, orange and red elements of scenes.

Item #.....**BWKB6**( )

#### KB12 [80B]

This dark blue filter acts as a color conversion filter by converting artificial light 3400° K to daylight color film. Without the use of this filter, strong yellow-orange color tones would occur.

Item #.....**BWKB12**( )

#### KB15 [80A]

The KB15 filter allows the photographer to use daylight film in artificial light with a color temperature of about 3000° K without the color overtones. Sizes 86-S9 are compound cemented.

Item #.....**BWKB15**( )

#### KB20

Depending on the percentage of red, conventional household bulbs require color temperature conversion whenever daylight color film is being used indoors.

Item #.....**BWKB20**( )



To order Warming and Cooling filters, just insert filter diameter (FILTER SIZE in charts on next page) after the item number of filter desired.



## F I L T E R S F O R C O L O R

### Warming and Cooling Filters, continued

#### SPECIFICATIONS FOR WARMING AND COOLING FILTERS

FILTER SIZE:	30.5	35.5	37	39	39N	40.5	43	46	48	49	52	55
81A Warm	-	24.00	-	44.00	84.00	57.00	69.00	34.00	34.00	16.00	19.00	19.00
81B Warm	-	24.00	-	44.00	84.00	57.00	69.00	34.00	34.00	16.00	19.00	19.00
KR3 Warm	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
KR6 Warm	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
KR12 Warm	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
KR15 Warm	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
KB1.5 Cool	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
KB3 Cool	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
KB6 Cool	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
KB12 Cool	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00
KB15 Cool	24.00	24.00	-	44.00	84.00	57.00	69.00	34.00	34.00	16.00	19.00	19.00
KB20 Cool	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00

FILTER SIZE:	58	60	62	67	72	77	82	86	95	105	112
81A Warm	21.00	68.00	28.00	30.00	40.00	44.00	163.00	202.00	266.00	293.00	-
81B Warm	21.00	68.00	28.00	30.00	40.00	44.00	163.00	202.00	266.00	293.00	-
KR3 Warm	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00
KR6 Warm	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00
KR12 Warm	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00
KR15 Warm	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00
KB1.5 Cool	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00
KB3 Cool	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00
KB6 Cool	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00
KB12 Cool	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00
KB15 Cool	21.00	68.00	28.00	30.00	40.00	44.00	163.00	72.00	266.00	-	133.00
KB20 Cool	21.00	32.00	28.00	30.00	40.00	44.00	58.00	72.00	266.00	116.00	133.00

FILTER SIZE:	122	B50	B60	B1	B2	B3	B6	S5.5	S7	S8	S9	PS
81A Warm	-	131.00	90.00	32.00	36.00	40.00	142.00	48.00	53.00	81.00	146.00	79.95
81B Warm	-	131.00	90.00	32.00	36.00	40.00	142.00	48.00	53.00	81.00	146.00	79.95
KR3 Warm	147.00	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
KR6 Warm	147.00	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
KR12 Warm	147.00	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
KR15 Warm	147.00	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
KB1.5 Cool	147.00	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
KB3 Cool	147.00	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
KB6 Cool	147.00	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	-	79.95
KB12 Cool	147.00	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
KB15 Cool	147.00	51.00	77.00	-	-	-	-	23.00	-	-	-	79.95
KB20 Cool	147.00	51.00	77.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95



## COLOR CORRECTION AND SLIM FILTERS

### Color Correction Filters

Color Correction filters are used for the correction of color balances in color films. They consist of original Kodak foils laminated and cemented between high quality optical glass. The edges are sealed, keeping humidity out, which prevents the filters from changing their color characteristics.

Order Number	Filter Color	Suppresses Color	Exposure Increase in F-Stop	Item Number
CC 05-B	Light Blue	Yellow	1/3	BWCC05B
CC 10-B	Light Blue	Yellow	1/3	BWCC10B
CC 20-B	Blue	Yellow	2/3	BWCC20B
CC 40-B	Dark Blue	Yellow	1	BWCC40B
CC 05-Y	Yellow	Blue/Violet	-	BWCC05Y
CC 10-Y	Yellow	Blue/Violet	1/3	BWCC10Y
CC 20-Y	Yellow	Blue/Violet	1/3	BWCC20Y
CC 40-Y	Yellow	Blue/Violet	1/3	BWCC40Y
CC 05-C	Blue-Green	Red	1/3	BWCC05C
CC10-C	Blue-Green	Red	1/3	BWCC10C
CC 20-C	Blue-Green	Red	1/3	BWCC20C
CC 40-C	Blue-Green	Red	2/3	BWCC40C

Order Number	Filter Color	Suppresses Color	Exposure Increase in F-Stop	Item Number
CC 05-R	Light Red	Blue-Green	1/3	BWCC05R
CC 10-R	Light Red	Blue-Green	1/3	BWCC10R
CC 20-R	Red	Blue-Green	1/3	BWCC20R
CC 40-R	Dark Red	Blue-Green	2/3	BWCC40R
CC 05-G	Green	Purple	1/3	BWCC05G
CC 10-G	Green	Purple	1/3	BWCC10G
CC 20-G	Green	Purple	1/3	BWCC20G
CC 40-G	Green	Purple	2/3	BWCC40G
CC 05-M	Purple (Magenta)	Green	1/3	BWCC05P
CC 10-M	Purple (Magenta)	Green	1/3	BWCC10P
CC 20-M	Purple (Magenta)	Green	1/3	BWCC20P
CC 40-M	Purple (Magenta)	Green	2/3	BWCC40P

**To order Color Correction or Fluorescent filters, just insert filter diameter (FILTER SIZE in charts below) after the item number of filter desired.**

### PRICES FOR COLOR CORRECTION FILTERS

FILTER SIZE:	39	40.5	43	46	48	49	52	55	58	60	62	67	72	77	82
Blue: CC05B, 10B, 20B, 40B	57.00	63.00	69.95	70.00	71.00	79.00	83.00	98.00	102.00	97.00	102.00	102.00	129.00	136.00	186.00
Yellow: CC05Y, 10Y, 20Y, 40Y	57.00	63.00	69.00	70.00	71.00	79.00	83.00	98.00	102.00	97.00	102.00	102.00	129.00	136.00	186.00
Cyan: CC05C, 10C, 20C, 40C	57.00	63.00	69.00	70.00	71.00	79.00	83.00	98.00	102.00	97.00	102.00	102.00	129.00	136.00	186.00
Red: CC05R, 10R, 20R, 40R	57.00	63.00	69.00	70.00	71.00	79.00	83.00	98.00	102.00	97.00	102.00	102.00	129.00	136.00	186.00
Green: CC05G, 10G, 20G, 40G	57.00	63.00	69.00	70.00	71.00	79.00	83.00	98.00	102.00	97.00	102.00	102.00	129.00	136.00	186.00
Magenta: CC05M, 10M, 20M, 40M	57.00	63.00	69.00	70.00	71.00	79.00	83.00	98.00	102.00	97.00	102.00	102.00	129.00	136.00	186.00

FILTER SIZE:	86	95	105	112	122	B50	B60	B2	B3	B6	S5.5	S7	S8	S9
Blue: CC05B, 10B, 20B, 40B	168.00	249.00	274.00	315.00	352.00	131.00	186.00	52.00	58.00	230.00	41.00	51.00	79.00	137.00
Yellow: CC05Y, 10Y, 20Y, 40Y	168.00	249.00	274.00	315.00	352.00	131.00	186.00	52.00	58.00	230.00	41.00	51.00	79.00	137.00
Cyan: CC05C, 10C, 20C, 40C	168.00	249.00	274.00	315.00	352.00	131.00	186.00	52.00	58.00	230.00	41.00	51.00	79.00	137.00
Red: CC05R, 10R, 20R, 40R	168.00	249.00	274.00	315.00	352.00	131.00	186.00	52.00	58.00	230.00	41.00	51.00	79.00	137.00
Green: CC05G, 10G, 20G, 40G	168.00	249.00	274.00	315.00	352.00	131.00	186.00	52.00	58.00	230.00	41.00	51.00	79.00	137.00
Magenta: CC05M, 10M, 20M, 40M	168.00	249.00	274.00	315.00	352.00	131.00	186.00	52.00	58.00	230.00	41.00	51.00	79.00	137.00

### Slim Filters for Extra-Wide Angle Lenses

A super slim mount for wide angle and zoom lenses that have over 70° angle of acceptance. These filters ultra thin, will not cause any vignetting and they don't have any front threads to mount on additional accessories.

**To order Slim filters, just insert filter diameter (FILTER SIZE in charts below) after the item number of filter desired.**

### PRICES FOR SLIM FILTERS

FILTER SIZES:	ITEM #	49	52	55	58	62	67	72	77	82	86	95	105	110	127	135
UV Haze 010	BWUV( )S	48.00	48.00	54.00	68.00	74.00	76.00	88.00	89.00	96.00	105.00	123.00	152.00	165.00	201.00	297.00
UV Haze 010 Multi-Coated	BWUVMC( )S	55.00	57.00	74.00	84.00	96.00	101.00	117.00	120.00	144.00	151.00	172.00	205.00	-	-	-
Skylight KR1.5	BSWL( )S	48.00	48.00	54.00	68.00	74.00	76.00	88.00	89.00	96.00	105.00	123.00	152.00	165.00	201.00	297.00
Skylight KR1.5 Multi-Coated	BWSLMC( )S	55.00	57.00	74.00	84.00	96.00	101.00	117.00	120.00	144.00	151.00	172.00	205.00	-	-	-
Circular Polarizer	BWCP( )S	58.00	63.00	68.00	76.00	89.00	99.00	113.00	121.00	123.00	-	-	-	-	-	-
Circular Polarizer Multi Coated	BWCPMC( )S	78.00	83.00	91.00	101.00	113.00	137.00	168.00	181.00	-	-	-	-	-	-	-

## NEUTRAL DENSITY FILTERS

### Neutral Density Filters

Neutral Density filters are used to cut down the amount of light. They block the entire visible spectrum evenly and allow light reduction without influencing color rendition or contrast.

#### 101 (ND0.3)

This lightly tinted filter reduces light transmission when there is too much light while using high-speed film.

Item #.....**BW101**( )

#### 102 (ND0.6)

Makes possible the use of relatively longer shutter speeds, while retaining a wide aperture, even in bright illumination. This allows for the emphasis of the subject by controlling depth of field, or creating motion effect with subject blur.

Item #.....**BW102**( )

#### 103 (ND0.9)

This filter is denser than the 102 and more light absorbing. It is suited for video, especially when a small enough lens opening is not available. In addition, a specific depth of field limit can be obtained.

Item #.....**BW103**( )

#### 106 (ND1.8)

This filter is especially useful when making extremely long exposures (several minutes). It is also suited for video.

Item #.....**BW106**( )

#### 110 (ND3.0)

Useful for the observation and documentation of industrial processes at high temperatures and light levels. This type of filter prevents strong flare and brings out interesting details.

Item #.....**BW110**( )

#### 113 (ND4.0)

This filter belongs in the realm of industrial processes and solar and lunar astrophotography. Due to its high density, it allows for the long exposures which are necessary.

Item #.....**BW113**( )

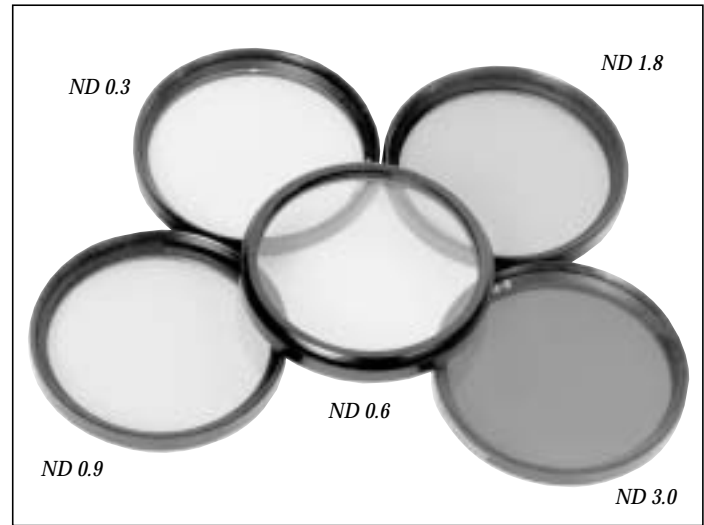
#### 120 (ND6.0)

For observation and photography of the sun. (Direct observation of the sun through any filter should be avoided, since long wavelength infrared radiation is not blocked.)

Item #.....**BW120**( )

### ND FILTER SPECIFICATIONS

NEUTRAL DENSITY FILTER #	FILTER FACTOR	F-STOP REDUCTION	DENSITY (ND)
101	2	1	0.3
102	4	2	0.6
103	8	3	0.9
106	64	6	1.8
110	1000	10	3.0
113	10,000	13	4.0
120	1000,000	20	6.0



To order Neutral Density filters, just insert filter diameter (FILTER SIZE in charts below) after the item number of filter desired.

### PRICES FOR NEUTRAL DENSITY FILTERS

FILTER SIZES:	30.5	35.5	37	39	39N	40.5	43	46	48	49	52	55	58	60	62	67	72	77
ND 101 (0.3)	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00	21.00	32.00	28.00	30.00	40.00	44.00
ND 102 (0.6)	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00	21.00	32.00	28.00	30.00	40.00	44.00
ND 103 (0.9)	19.00	24.00	24.00	23.00	51.00	21.00	21.00	20.00	20.00	16.00	19.00	19.00	21.00	32.00	28.00	30.00	40.00	44.00
ND 106 (1.8)	33.00	-	44.00	44.00	63.00	37.00	36.00	34.00	34.00	31.00	35.00	42.00	43.00	68.00	50.00	61.00	85.00	95.00
ND 110 (3.0)	33.00	-	44.00	44.00	63.00	37.00	36.00	34.00	34.00	31.00	35.00	42.00	43.00	68.00	50.00	61.00	85.00	95.00
ND 113 (4.0)	33.00	-	44.00	44.00	63.00	37.00	36.00	34.00	34.00	31.00	35.00	42.00	43.00	68.00	50.00	61.00	85.00	95.00
ND 120 (6.0)	33.00	-	44.00	44.00	63.00	37.00	36.00	34.00	34.00	31.00	35.00	42.00	43.00	68.00	50.00	61.00	85.00	95.00

FILTER SIZES:	82	86	95	105	112	122	B50	B60	B1	B2	B3	B6	S5.5	S7	S8	S9	PS
ND 101 (0.3)	58.00	72.00	101.00	116.00	133.00	147.00	51.00	78.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
ND 102 (0.6)	58.00	72.00	101.00	116.00	133.00	147.00	51.00	78.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
ND 103 (0.9)	58.00	72.00	101.00	116.00	133.00	147.00	51.00	78.00	32.00	36.00	40.00	142.00	23.00	25.00	36.00	62.00	79.95
ND 106 (1.8)	114.00	112.00	166.00	182.00	211.00	232.00	67.00	99.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	149.95
ND 110 (3.0)	114.00	112.00	166.00	182.00	211.00	232.00	67.00	99.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	149.95
ND 113 (4.0)	114.00	112.00	166.00	182.00	211.00	232.00	67.00	99.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	149.95
ND 120 (6.0)	114.00	112.00	166.00	182.00	211.00	232.00	67.00	99.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	149.95

## GRADUATED FILTERS

### Color Graduated Filters

Manufactured from high Quality CR-39 acrylic, these filters are color toned in one half of the filter which is smoothly graduated into the clear portion. Colored and clear filter portions can be brought into the desired position by rotating the mount. They can also be combined with other filters or other color graduated filters. Two color graduated filters rotated by 180° to each other allow a picture composition of colors to fade into each other.

**Graduated 501 Neutral Density 2x (Grad ND 0.3)**

The neutral gray coloring of one half of the filter has a transmission level of 50%. It is used to reproduce a part of the scene one f-stop darker than the rest.

**Item #.....BW501( )**

**Graduated 502 Neutral Density 4x (Grad ND 0.6)**

This filter has a reduction of 2 f-stops due to its 25% transmission factor.

**Item #.....BW502( )**

**Color Graduated 590 Red**  
Simulated sunset atmospheres can be created.

**Item #.....BWGR( )**

**Color Graduated 524 Orange**  
The orange coloring of the graduation allows, for example, a sunset atmosphere to appear softer and less evident than with a red graduation.

**Item #.....BWGO( )**

**Color Graduated 543 Violet**  
Violet coloring of one half of the filter.

**Item #.....BWGV( )**

**Color Graduated 550 Tabac**  
Brownish tobacco like coloring of one half.

**Item #.....BWGTO( )**

**Color Graduated 560 Yellow Green**  
Yellow Green like coloring of one half.

**Item #.....BWGYG( )**



Shot without any filter

**Color Graduated 561 Green**  
Green coloring of one half.

**Item #.....BWGGR( )**

**Color Graduated 581 Blue**  
Blue coloring of one half.

**Item #.....BWGBL( )**

**Color Graduated 585 Lilac**  
Lilac like coloring of one half.

**Item #.....BWGL( )**



Shot with a 502 Neutral Density 4x

**To order Color Graduated filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.**

### PRICES FOR COLOR GRADUATED FILTERS

FILTER SIZE:	39	46	48	49	52	55	58	60	62	67
Graduated 501 Neutral Density	48.00	56.00	48.00	41.00	42.00	43.00	44.00	53.00	47.00	54.00
Graduated 502 Neutral Density	48.00	56.00	48.00	41.00	42.00	43.00	44.00	53.00	47.00	54.00
Color Graduated 590 Red	-	56.00	48.00	41.00	42.00	43.00	44.00	53.00	47.00	54.00
Color Graduated 524 Orange	-	56.00	48.00	41.00	42.00	43.00	44.00	53.00	47.00	54.00
Color Graduated 543 Violet	-	56.00	48.00	41.00	42.00	43.00	44.00	53.00	47.00	54.00
Color Graduated 550 Tabac	-	56.00	48.00	41.00	42.00	43.00	44.00	53.00	47.00	54.00
Color Graduated 560 Yellow Green	-	56.00	48.00	41.00	42.00	43.00	44.00	53.00	47.00	54.00
Color Graduated 561 Green	-	56.00	48.00	41.00	42.00	43.00	44.00	53.00	47.00	54.00
Color Graduated 581 Blue	-	56.00	48.00	41.00	42.00	43.00	44.00	53.00	47.00	54.00
Color Graduated 585 Lilac	-	56.00	48.00	41.00	42.00	43.00	44.00	53.00	47.00	54.00

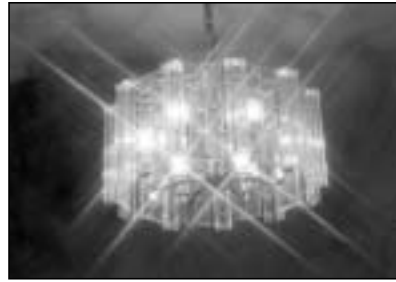
FILTER SIZE:	72	77	82	86	95	105	B50	B60	B6	PS
Graduated 501 Neutral Density	62.00	76.00	96.00	130.00	173.00	211.00	76.00	100.00	205.00	99.95
Graduated 502 Neutral Density	62.00	76.00	96.00	130.00	173.00	211.00	76.00	100.00	205.00	99.95
Color Graduated 590 Red	62.00	76.00	96.00	130.00	173.00	211.00	76.00	100.00	205.00	99.95
Color Graduated 524 Orange	62.00	76.00	96.00	130.00	173.00	211.00	76.00	100.00	205.00	99.95
Color Graduated 543 Violet	62.00	76.00	96.00	130.00	173.00	211.00	76.00	100.00	205.00	99.95
Color Graduated 550 Tabac	62.00	76.00	96.00	130.00	173.00	211.00	76.00	100.00	205.00	99.95
Color Graduated 560 Yellow Green	62.00	76.00	96.00	130.00	173.00	211.00	76.00	100.00	205.00	99.95
Color Graduated 561 Green	62.00	76.00	96.00	130.00	173.00	211.00	76.00	100.00	205.00	99.95
Color Graduated 581 Blue	62.00	76.00	96.00	130.00	173.00	211.00	76.00	100.00	205.00	99.95
Color Graduated 585 Lilac	62.00	76.00	96.00	130.00	173.00	211.00	76.00	100.00	205.00	99.95

**All items are complete with all accessories as supplied by the manufacturer**

## STAR EFFECT AND FLUORESCENT FILTERS

### Star Effects Filters

Made of high-quality optical glass with a fine grid pattern etched on the surface. Depending on the pattern and size of the grid, point light sources and reflections create multi-beam stars. One of the most creative accessories that allows you to add dazzling effects. Bright star line effects, which generate excitement and can enhance mood and glamour in a wide range of images, are created from either original light sources or bright reflections. The Star Effect Filters are used most commonly to add sparkle to water scenes, candle flames and stadium spotlights.



Shot with a 4x Cross Screen (Star 4)



Shot with a Double Sunny (Star 16)

#### 4x Cross Screen (Star 4)

Designed to create a 4-point star from a point light source or reflection. Rotatable mount allows the photographer or videographer the freedom to decide the orientation of the star effect.

Item #.....BWCS4( )

#### 6x Cross Screen (Star 6)

The grids of this filter are designed to create a 6-point star from a point light source or reflection. Rotatable mount.

Item #.....BWCS6( )

#### 8x Cross Screen (Star 8)

The grids of this filter are designed to create an 8-point star from a point light source or reflection. Rotatable mount.

Item #.....BWCS8( )

#### Double Sunny (Star 16)

A dense star shaped grid pattern creates an extremely fine, yet intense, 16-point star effect from each point light source or reflection. Strong light sources create an effect similar to a floodlight.

Item #.....BWDS( )

To order Star filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.

### PRICES FOR STAR FILTERS

FILTER SIZE:	39	40.5	43	46	48	49	52	55	58	60	62	67	72	77
4x Cross (Star 4)	37.00	37.00	37.00	34.00	35.00	32.00	30.00	34.00	37.00	44.00	41.00	43.00	50.00	56.00
6x Cross (Star 6)	37.00	37.00	37.00	34.00	35.00	32.00	30.00	34.00	37.00	44.00	41.00	43.00	50.00	56.00
8x Cross (Star 8)	37.00	37.00	37.00	34.00	35.00	32.00	32.00	34.00	37.00	44.00	41.00	43.00	50.00	56.00
Double Sunny (Star 16)	-	-	-	-	-	36.00	38.00	39.00	42.00	42.00	42.00	53.00	58.00	66.00

FILTER SIZE:	82	86	95	105	B50	B60	B1	B2	B3	B6	S5.5	S7	S8	S9	PS
4x Cross (Star 4)	89.00	128.00	213.00	229.00	95.00	126.00	40.00	42.00	42.00	205.00	29.00	25.00	26.00	94.00	89.95
6x Cross (Star 6)	89.00	128.00	213.00	229.00	95.00	126.00	40.00	42.00	42.00	205.00	29.00	25.00	26.00	94.00	89.95
8x Cross (Star 8)	89.00	128.00	213.00	229.00	95.00	126.00	40.00	42.00	42.00	205.00	29.00	25.00	26.00	94.00	89.95
Double Sunny (Star 16)	-	-	-	-	100.00	163.00	-	-	-	149.00	-	-	-	-	-

### Fluorescent Filters

#### B+W 499 F-Day (FLD)

This light violet filter eliminates the unpleasant blue-green color tint produced by daylight films, illuminated by fluorescent tubes. For manual adjustment, increase f-stop 1 stop.

Item #.....BWFLD( )

### PRICES FOR FLUORESCENT FILTERS

FILTER SIZE:	30.5	39	39N	40.5	43	46	48	49	52	55	58	60	62	67
Fluorescent (FLD)	33.00	34.00	-	37.00	36.00	29.00	32.00	27.00	33.00	35.00	37.00	60.00	42.00	49.00

FILTER SIZE:	72	77	82	86	95	105	B50	B60	B6	S5.5	S7	S8	S9	PS
Fluorescent (FLD)	72.00	82.00	101.00	112.00	166.00	179.00	67.00	101.00	195.00	30.00	31.00	44.00	94.00	102.50

### Spectra Effects Filters

B+W Spectra filters have a fine structure of up to 30 million micro-prisms. This not only creates a star effect, but also multi-colored rays from lights and reflections. The various types of spectra star filters

vary in detail, but they are all rotatable. The extensive choice of Spectra filters offer tremendous creative potential for photographers and videographers.

#### Spectra 2x

Each light source or reflection in the image area will be reproduced as a multi-colored star effect. The orientation of the rays can be selected by turning the rotating mount.

Item #.....BWS2( )

#### Spectra 4x

This filter creates four multi-colored light rays from each point light source. The orientation of the ray pattern can be selected by turning the rotating mount.

Item #.....BWS4( )

#### Spectra 8x

This produces eight colorful light rays whose orientation can be selected by turning the rotating mount.

Item #.....BWS8( )

#### Spectra Spot

A circular clear spot leaves the object unchanged and surrounds it with a colorful play of colors.

Item #.....BWSS( )Q

#### Axicon Spectra 72x

This attachment creates 72 multi-colored light rays surrounding the light source.

Item #.....BWAS72( )

#### Orbit Spectra 48x

The effect of this attachment is to create a circular pattern of multi-colored light rays surrounding the light source.

Item #.....BWOS48( )

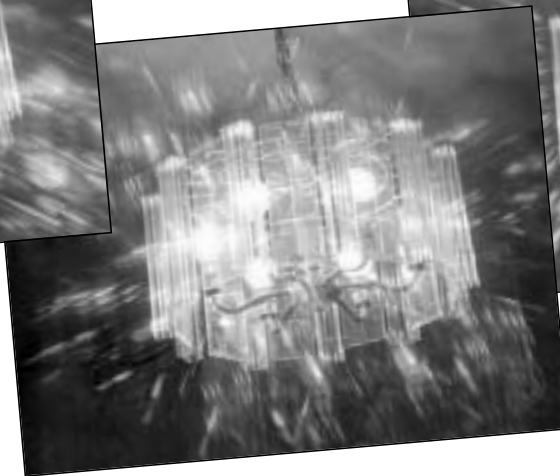
#### Spectra Quadro

Surrounds each light source with a special pattern in a rectangular shape. It gives a multi-colored frame to your picture.

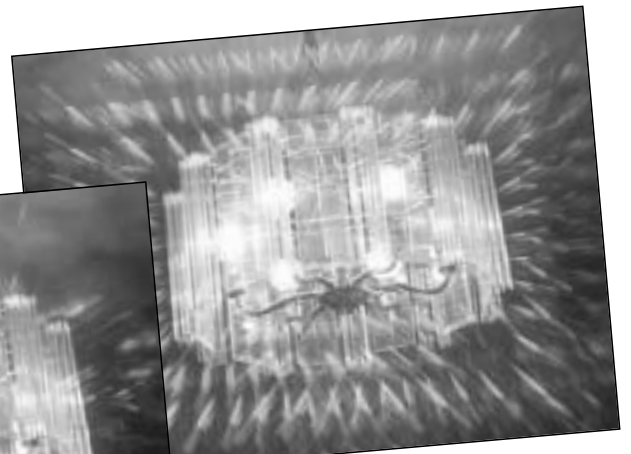
Item #.....BWSQ( )



Shot with a B+W Spectra 2 Filter



Shot with a B+W Spectra 8x Filter



Shot with a B+W Spectra Quadro Filter

To order Spectra filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.

### PRICES FOR SPECTRA FILTERS

FILTER SIZE:	49	52	55	58	60	62	67	72	77	B50	B60	B1	B2	B3	B6	S7	S8	PS
Spectra 2x	39.00	39.00	43.00	45.00	50.00	48.00	53.00	59.00	64.00	72.00	100.00	47.00	48.00	51.00	199.00	34.00	44.00	-
Spectra 4x	39.00	39.00	43.00	45.00	50.00	48.00	53.00	59.00	64.00	72.00	100.00	47.00	48.00	51.00	199.00	34.00	44.00	-
Spectra 8x	39.00	39.00	43.00	45.00	50.00	48.00	53.00	59.00	64.00	72.00	100.00	47.00	48.00	51.00	199.00	34.00	44.00	-
Orbit Spectra 48x	39.00	39.00	43.00	45.00	50.00	48.00	53.00	59.00	64.00	72.00	100.00	47.00	48.00	51.00	199.00	34.00	44.00	-
Axicon Spectra 72x	44.00	45.00	47.00	51.00	57.00	53.00	58.00	66.00	74.00	-	-	-	-	-	199.00	39.00	50.00	-
Spectra Spot	39.00	39.00	43.00	45.00	50.00	48.00	53.00	59.00	64.00	72.00	100.00	-	-	-	-	-	-	75.00
Spectra Quadro	39.00	39.00	43.00	45.00	50.00	48.00	53.00	59.00	64.00	72.00	100.00	47.00	48.00	51.00	199.00	34.00	44.00	-

## F I L T E R S F O R S P E C I A L E F F E C T S

### Soft Focus Filters and Fog Effect Filters

Soft Focus and Fog filters are popular lens attachments that are used for a wide variety of applications, such as lowering contrast, creating halo effects around highlights, creating a mist effect, and blurring outer or inner images. They are very useful for still-life and roman-

tic portrait photography, and they can produce a surrealistic atmosphere for everyday subjects, too. Partial soft focus filters *with a clear center* can help concentrate the attention of the viewer to a specific picture subject.

#### Soft Focus 1 (WZ-1)

Reduces contrast and creates a soft halo around highlights. Creates a hint of softness or blurred contours. Enhanced by opening up, or reduced by closing down the aperture.

Item #.....**BWSF1**( )

#### Soft Focus 2 (WZ-2)

Same as above, with more reduced contrast.

Item #.....**BWSF2**( )

#### Soft Image

Slightly more pronounced softening effect than the Soft Focus 2. Great for backlit pictures, because the halo effect is further enhanced, yet shadow areas remain sharply defined. Image effect does not change with the lens opening being used.

Item #.....**BWSI**( )

#### Zeiss Softar 1

Made of tiny lens-shaped structures in the glass. While softening the highlights, the basic focus remains sharp up to the edges with the classic soft focus accessory. The degree of softening is not affected by the aperture setting.

Item #.....**BWZS1**( )

#### Zeiss Softar 2

Same as above, with slightly more effect.

Item #.....**BWZS2**( )

#### Spot Lens

Permits a circular section of the subject in the center of the image sharp reproduction. All other surrounding details fade out in a blurred effect. This creative artistic tool intentionally guides the eye to the center of attention. Strong colors create a glowing halo around the center part of the image. The degree of the blurred effect varies with the lens aperture opening.

Item #.....**BWSL**( )Q

#### Fog Filters 1, 2 & 3 (Diffusion)

Pictures taken with fog filters appear to have been taken in a fine, bright mist. Whitening colors and soft lights create a romantic atmosphere which can enhance the tone of the image in an unusual way. In backlit situations, there is an even stronger effect. The three densities allow for variations.

Item #.....**BWF1**( )

Item #.....**BWF2**( )

Item #.....**BWF3**( )



Taken with a Soft Spot Filter

#### Soft Spot

Produces a clear circular section in the center of the image, where details are reproduced in sharp focus. Surrounding area does not go completely out of focus but remains visible in softly flared contours with a slight whitening of colors.

Item #.....**BWSS**( )

### PRICES FOR SOFT FOCUS AND FOG EFFECT FILTERS

FILTER SIZES:	30.5	35.5	37	39	40.5	43	46	48	49	52	55	58	60	62	67	72	77
Soft Focus 1	22.00	24.00	26.00	27.00	25.00	21.00	20.00	20.00	20.00	21.00	24.00	26.00	41.00	30.00	36.00	46.00	51.00
Soft Focus 2	22.00	24.00	26.00	27.00	25.00	21.00	20.00	20.00	20.00	21.00	24.00	26.00	41.00	30.00	36.00	46.00	51.00
Soft Image	-	-	-	21.00	23.00	23.00	22.00	22.00	19.00	25.00	27.00	26.00	51.00	32.00	37.00	47.00	51.00
Zeiss Softar 1	-	-	-	-	-	-	-	-	147.00	155.00	162.00	161.00	-	163.00	174.00	174.00	204.00
Zeiss Softar 2	-	-	-	-	-	-	-	-	147.00	155.00	162.00	161.00	-	163.00	174.00	174.00	204.00
Fog Filter 1	-	-	-	21.00	25.00	25.00	24.00	27.00	25.00	26.00	29.00	32.00	37.00	35.00	37.00	41.00	48.00
Fog Filter 2	-	-	-	21.00	25.00	25.00	24.00	27.00	25.00	26.00	29.00	32.00	37.00	35.00	37.00	41.00	48.00
Fog Filter 3	-	-	-	21.00	25.00	25.00	24.00	27.00	25.00	26.00	29.00	32.00	37.00	35.00	37.00	41.00	48.00
Spot Lens	-	-	-	-	33.00	33.00	31.00	33.00	33.00	35.00	37.00	39.00	45.00	41.00	45.00	51.00	58.00
Soft Spot	-	-	-	21.00	25.00	25.00	24.00	27.00	25.00	26.00	29.00	32.00	37.00	35.00	37.00	41.00	48.00

FILTER SIZES:	82	86	95	105	112	122	B50	B60	B1	B2	B3	B6	S5.5	S7	S8	S9	PS
Soft Focus 1	81.00	84.00	124.00	138.00	160.00	163.00	57.00	90.00	34.00	42.00	47.00	151.00	24.00	29.00	41.00	68.00	84.95
Soft Focus 2	81.00	84.00	124.00	138.00	160.00	163.00	57.00	90.00	34.00	42.00	47.00	151.00	24.00	29.00	41.00	68.00	84.95
Soft Image	89.00	91.00	137.00	130.00	-	63.00	102.00	-	-	-	-	190.00	30.00	38.00	-	102.00	89.95
Zeiss Softar 1	228.00	180.00	-	-	-	-	-	▲	-	-	-	◆	-	-	-	-	229.95
Zeiss Softar 2	228.00	180.00	-	-	-	-	-	▲	-	-	-	◆	-	-	-	-	229.95
Fog Filter 1	-	106.00	158.00	168.00	-	-	59.00	97.00	-	46.00	46.00	190.00	25.00	25.00	25.00	65.00	84.95
Fog Filter 2	-	106.00	158.00	168.00	-	-	59.00	97.00	-	46.00	46.00	190.00	25.00	25.00	25.00	65.00	84.95
Fog Filter 3	-	106.00	158.00	168.00	-	-	59.00	97.00	-	46.00	46.00	190.00	25.00	25.00	25.00	65.00	-
Spot Lens	75.00	-	-	-	-	-	-	58.00	-	-	-	190.00	-	-	-	-	-
Soft Spot	-	-	-	-	-	-	59.00	97.00	-	-	-	97.00	-	-	-	-	84.95

▲ Not available from B&W - Available from Hasselblad    ◆ Not available from B&W - Available from Rolleiflex

### Multi-Image Prisms

Prism attachments are manufactured from high-quality glass and consist of several prism surfaces of different shapes. They produce multiple images, depending on the number of the prisms. The position of the partial images with respect to each other depends upon the individual prism attachment and can be changed by rotating the prism to the desired setting. Some prism attachments have a colored filter foil underneath and create colorful kaleidoscope effects. In addition, multiple variable effects are achieved through the combination of other filters or attachments.

Prisms are excellent special effect attachments for use with video cameras. When the prism attachments are turned while the camera is running, the partial images rotate around each other.

#### Multi-Image 3x Prism

Consists of high quality glass with three equally sized prism surfaces that meet in the center. It produces three identical images whose positioning can be changed by turning the rotating mount.

Item #.....**BWP3**( )

#### Multi-Image 5x Prism

This prism contains a square prism in the center of the attachment and four trapezoid-shaped prisms in the outer area. It produces one central image surrounded by four identical images which may be moved around the square by rotation.

Item #.....**BWP5**( )

#### Multi-Image 6x Prism

A Pentagonal pentaprism in the center and five trapezoid-shaped prisms surrounding it produce one image, surrounded by five identical images which may be rotated.

Item #.....**BWP6**( )

#### 3x Prism Parallel

Consists of three parallel prisms of equal width, which produce two parallel repetitions of the main image. The orientation of the three images can be controlled by rotation.

Item #.....**BWPP3**( )

#### 6x Prism Parallel

Contains six parallel prisms, one of which takes up the largest half of the field, and five narrow parallel prisms take up the remaining portion. The first of six images reproduces the subject fully, and the other five reproduce sections of the subject in its height. The multiple images appear to flow into the background. The orientation of the six images can be controlled by rotation.

Item #.....**BWPP6**( )

#### 3x Color Prism

The 3x Color Prism attachment produces the same effect as the 3x Prism Parallel, but adds a gradual, soft blending of colors. The three parallel images can be positioned by rotation.

Item #.....**BWCP3**( )

#### 6x Color Prism

The 6x Color Prism attachment produces the same effect as the 6x Prism Parallel, with the addition of a soft blend of colors. All the colors are blended together in the central in the central image. The surrounding images have one pure color which blends into the adjacent colors. The six parallel images can be positioned by rotation.

Item #.....**BWCP6**( )

*To order Multi-Image Prisms, just insert filter diameter (FILTER SIZE in chart) after the item number of filter desired.*

### PRICES FOR MULTI-IMAGE PRISM FILTERS

Lens	46	48	49	52	55	58	60	62
Multi-Prism 3x Prism	44.00	44.00	43.00	43.00	48.00	54.00	68.00	65.00
Multi-Prism 5x Prism	44.00	44.00	43.00	43.00	48.00	54.00	68.00	65.00
Multi-Prism 6x Prism	44.00	44.00	43.00	43.00	48.00	54.00	68.00	65.00
3x Prism Parallel	44.00	44.00	43.00	43.00	48.00	54.00	68.00	65.00
6x Prism Parallel	50.00	50.00	50.00	53.00	56.00	58.00	77.00	75.00
3x Color Prism	65.00	62.00	65.00	65.00	67.00	70.00	91.00	87.00
6x Color Prism	65.00	62.00	65.00	65.00	67.00	70.00	91.00	87.00

Lens	67	72	77	B50	B60	B2	B3	B6
Multi-Prism 3x Prism	69.00	74.00	75.00	76.00	112.00	49.00	52.00	198.00
Multi-Prism 5x Prism	69.00	74.00	75.00	67.00	97.00	49.00	52.00	198.00
Multi-Prism 6x Prism	69.00	74.00	75.00	67.00	97.00	49.00	52.00	198.00
3x Prism Parallel	69.00	90.00	75.00	-	-	-	-	-
6x Prism Parallel	84.00	107.00	101.00	-	-	-	-	-
3x Color Prism	94.00	107.00	110.00	105.00	158.00	-	-	-
6x Color Prism	94.00	107.00	110.00	119.00	179.00	-	-	-

**Overnight Shipping Available**



## F I L T E R S F O R S P E C I A L E F F E C T S

### Trick Effect Filters

#### Speed Effect

A unique "half lens" for fascinating speed and moving effect. The rotating mount allows adjustment to any subject matter in the image. The effect can be increased or decreased with different aperture settings.

Item #.....**BWSE**( )

#### Dual Image (Double Exposure)

This unusual special effect lens allows split exposure of an image. By rotating the mount, any segment of the picture area may be exposed, and then the second half is double exposed.

Item #.....**BWDI**( )

#### BIFO 1 and 2

The BIFO lenses allow simultaneous focusing on distant and near objects in the same frame. Approximately  $\frac{1}{3}$  of the 360° surface of the Bifo attachment works as a close-up lens. The +2.5 diopter (Bifo 1) and +3.5 diopter (Bifo 2) allow focusing on a close object in the 0.40m and 0.28m, respectively (15.75" and 11"). The remaining part of the attachment remains unchanged.

Bifo Lens #1.....**BWB1**( )      Bifo Lens #2.....**BWB2**( )

#### Prism Lens

Close-up attachment with off-center clear spot. Allows the inclusion of a distant subject into a close-up photography where normal depth-of-field conditions would not be adequate. It gives the appearance of a double exposure.

Item #.....**BWPL**( )

#### Close-Up Prism

A unique combination of double image and 7x close-up lens. The rotating mount allows desired positioning of double image for horizontal, vertical or diagonal placement of subject.

Item #.....**BWCUP**( )

**To order Trick Effect Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.**

### PRICES FOR TRICK EFFECTS FILTERS

FILTER SIZE:	46	48	49	52	55	58	60	62	67	72	77	B6
Speed Effect	-	-	41.00	42.00	45.00	47.00	52.00	48.00	62.00	80.00	104.00	-
Dual Image	-	-	35.00	37.00	38.00	41.00	51.00	50.00	54.00	62.00	68.00	-
Bifo #1	39.00	38.00	37.00	38.00	42.00	42.00	48.00	44.00	-	-	-	-
Bifo #2	39.00	38.00	37.00	38.00	42.00	42.00	48.00	44.00	-	-	-	-
Prism Lens	41.00	40.00	42.00	43.00	45.00	47.00	63.00	65.00	66.00	69.00	72.00	201.00
Close-Up Prism	41.00	41.00	42.00	43.00	45.00	47.00	65.00	65.00	66.00	69.00	72.00	-



Taken with a Multi-Image 5x Prism



Taken without any filter



Taken with a B+W Speed Effect Filter



Taken with a B+W Bifo 2

### Close-Up Lenses

Single element diopter lenses enable focusing on subjects much closer than the standard lens allows. Great for detail photos of nature subjects and a wide range of situations. Available in several diopter strengths.

- |  |  |
|--|--|
| Close-Up NL 0.25<br>+0.25 diopter.<br>Item #..... <b>BWCU.25</b> ( ) | Close-Up NL3<br>+3 diopter.<br>Item #..... <b>BWCU3</b> ( )    |
| Close-Up NL 0.50<br>+0.50 diopter.<br>Item #..... <b>BWCU.5</b> ( )  | Close-Up NL4<br>+4 diopter.<br>Item #..... <b>BWCU4</b> ( )    |
| Close-Up NL1<br>+1 diopter.<br>Item #..... <b>BWCU1</b> ( )          | Close-Up NL5<br>+5 diopter.<br>Item #..... <b>BWCU5</b> ( )    |
| Close-Up NL2<br>+2 diopter.<br>Item #..... <b>BWCU2</b> ( )          | Macro Lens NL10<br>+10 diopter.<br>Item #..... <b>BWML</b> ( ) |

SPECIFICATIONS OF CLOSE-UP LENSES								
CLOSE-UP LENSES	NL 0.25 +0.25	NL 0.50 +0.5	NL1 +1.0	NL2 +2.0	NL3 +3.0	NL4 +4.0	NL5 +5.0	Macro Lens +10
DISTANCE TO SUBJECT IN METERS								
LENS FOCUSING DISTANCE IN METERS	∞	4.00	2.00	1.00	0.50	0.33	0.25	0.20
10	2.86	1.67	0.90	0.47	0.325	0.245	0.20	-
7	2.55	1.56	0.87	0.46	0.32	0.24	0.195	-
5	2.22	1.43	0.83	0.45	0.31	0.235	0.19	-
LENS FOCUSING DISTANCE IN METERS	3	1.71	1.20	0.75	0.42	0.30	0.23	0.185
1	0.80	0.67	0.50	0.33	0.25	0.20	0.165	0.09
0.5	0.44	0.40	0.33	0.25	0.20	0.16	0.14	0.08

*To order Close-Up Lenses, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.*

### PRICES FOR CLOSE-UP LENSES

FILTER SIZES:	30.5	37	39	40.5	43	46	48	49	52	55	58	60	62	67	72
Close-Up 0.25,0.50	22.00	26.00	30.00	25.00	21.00	20.00	20.00	16.00	21.00	19.00	21.00	32.00	28.00	30.00	40.00
Close-Up 1-4	19.00	24.00	27.00	21.00	21.00	20.00	20.00	16.00	21.00	19.00	21.00	32.00	28.00	30.00	40.00
Close-Up 5	22.00	26.00	30.00	25.00	21.00	20.00	20.00	16.00	21.00	19.00	21.00	32.00	28.00	30.00	40.00
Macro Lens +10	-	-	-	-	-	-	-	32.00	32.00	41.00	41.00	-	-	-	-

FILTER SIZES:	77	82	86	95	105	B50	B60	B1	B2	B3	B6	S5.5	S7	S8	S9
Close-Up 0.25,0.50	44.00	114.00	112.00	166.00	182.00	64.00	100.00	34.00	39.00	44.00	147.00	24.00	25.00	41.00	94.00
Close-Up 1-4	44.00	114.00	112.00	166.00	182.00	64.00	100.00	30.00	35.00	38.00	137.00	23.00	23.00	36.00	94.00
Close-Up 5	44.00	114.00	112.00	166.00	182.00	64.00	100.00	34.00	39.00	44.00	147.00	24.00	25.00	41.00	94.00

### Specialty Filters

The B+W special filters are strong absorbing filters for applications with defined wave length ranges when a standard filter will pass too much of one range of wavelength or not enough of another.

The specifications in brackets indicate the Schott glass used for the filter.

**470 [Schott BG 18]**  
The B+W 470 blue/green filter is used to differentiate reproductions of green tones in reproduction photography. It may also be used to create the effect of haze. For manual adjustment, increase 1 f-stop. The filter factor is approximately 2.  
Item #.....**BW470**( )

**484 [Schott UG 3]**  
This deep violet filter transmits only ultraviolet light, almost without reduction. It is used in fluorescent photography in front of the light source. In addition, it can also be used to enhance haze and fog in black and white photography. For manual adjustment, increase 3/4 f-stops.  
Item #.....**BW484**( )

**403 [Schott UG 1]**  
Ultra dark violet black filter. Transmits a small amount of visible light, completely blocking wavelengths longer than 360nm. Used for UV-reflection photography and for the front of UV emitting illumination in UV-fluorescent photography. Depending on the film, increase f-stop 3-6 stops.  
Item #.....**BW403**( )

**489 [Schott KG 3]**  
This filter is frequently described as a heat absorbing filter, because it lets the visible spectral range pass while the infrared rays from 780nm are strongly blocked. It is often used to protect IR-sensitive CCD-sensors, or in illumination systems.  
Item #.....**BW489**( )

## F I L T E R S F O R S P E C I A L E F F E C T S

### Specialty Filters, continued

*To order Specialty Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.*

#### PRICES FOR SPECIALTY FILTERS

FILTER SIZES:	30.5	37	39	40.5	43	46	48	49	52	55	58	60	62	67	72	77
#470 Blue Green	33.00	44.00	44.00	37.00	36.00	34.00	34.00	31.00	35.00	38.00	43.00	68.00	50.00	61.00	85.00	95.00
#484 Violet	33.00	44.00	44.00	37.00	36.00	34.00	34.00	31.00	35.00	38.00	43.00	68.00	50.00	61.00	85.00	95.00
#403 Black	33.00	44.00	44.00	37.00	36.00	34.00	34.00	31.00	35.00	38.00	43.00	68.00	50.00	61.00	85.00	95.00
#489 IR Absorb Blue/Grn	33.00	44.00	44.00	37.00	36.00	34.00	34.00	31.00	32.00	42.00	43.00	68.00	50.00	61.00	85.00	95.00

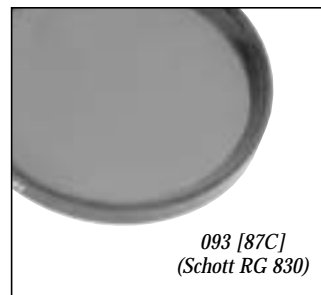
FILTER SIZES:	82	86	95	105	112	122	B50	B60	B1	B2	B3	B6	S5.5	S7	S8	S9	PS
#470 Blue Green	114.00	112.00	166.00	182.00	211.00	232.00	71.00	110.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	-
#484 Violet	114.00	112.00	166.00	182.00	211.00	232.00	71.00	110.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	-
#403 Black	114.00	112.00	166.00	182.00	211.00	232.00	71.00	110.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	-
#489 IR Absorb Blue/Grn	114.00	112.00	166.00	182.00	211.00	232.00	58.00	99.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	149.95

### Infrared Filters

The spectral range above 780nm is not visible to the human eye. Nevertheless, there is a guideline for special, infrared sensitive film. The sensitization of black and white infrared film goes to approximately 900nm. Some infrared images that consist of a combination of visible and infrared light are possible. For purely infrared images, radiation below approximately 780nm must be completely filtered out.

**092 [89B] (Schott RG 830)**  
 This dark red filter is for black and white infrared films and filters out light below approximately 650nm. It allows pictures of a pure red image, while making good use of the relatively low sensitivity of infrared films. Filter factor depends on the film sensitivity.  
**Item # .....BW092( )**

**093 [87C] (Schott RG 830)**  
 This black infrared filter will filter out the entire visible spectrum. It is used with black and white infrared films, with a sensitivity of up to 1000nm. The filter factor is determined by the film sensitivity.  
**Item # .....BW093( )**



**099 [12] (Schott OG 530)**  
 This yellow-orange colored filter blocks blue and blue-green portion of visible spectrum, up to approximately 500nm. Reduces excessive sensitivity of color infrared films, helps avoid a blue tint and differentiates colors more evenly. Filter factor depends upon film sensitivity.  
**Item # .....BW099( )**

*To order Infrared Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.*

#### PRICES FOR INFRARED FILTERS

FILTER SIZES:	30.5	37	39	40.5	43	46	48	49	52	55	58	60	62	67	72	77
#092 Dk Red Infrared	33.00	44.00	44.00	37.00	36.00	34.00	34.00	31.00	32.00	42.00	43.00	68.00	50.00	61.00	85.00	95.00
#093 Black Infrared	33.00	44.00	44.00	37.00	36.00	34.00	34.00	31.00	32.00	42.00	43.00	68.00	50.00	61.00	85.00	95.00
#099 Orange Infrared	33.00	44.00	44.00	37.00	36.00	34.00	34.00	31.00	32.00	42.00	43.00	68.00	50.00	61.00	85.00	95.00

FILTER SIZES:	82	86	95	105	112	122	B50	B60	B1	B2	B3	B6	S5.5	S7	S8	S9	PS
#092 Dk Red Infrared	114.00	112.00	166.00	182.00	211.00	232.00	58.00	99.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	149.95
#093 Black Infrared	114.00	112.00	166.00	182.00	211.00	232.00	58.00	99.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	149.95
#099 Orange Infrared	114.00	112.00	166.00	182.00	211.00	232.00	58.00	99.00	44.00	52.00	58.00	230.00	30.00	37.00	57.00	94.00	149.95

### Pop Color Filters

Pop filters are made of high-quality glass that is toned in brilliant colors. They are used for an intentional surrealistic color effect by totally overlaying the color of the scene with the color of the filter. Although both tungsten and daylight balanced films can be used with equal success, it should be noted that exposure factors will vary. These filters give the best results with detailed subjects, especially when

strong colors or black surfaces are included in the foreground. The color overlaid by the filter then achieves a creative reference point. If the dominating color of the subject is similar to the filter color, the referred filter factor is reduced. If a filter in the complementary color is chosen, the filter factor is increased.

Information in brackets indicate the respective Schott color glass.

**Pop Filter 424 Orange**  
(Schott OG 530)

The main function of these filters is to give an intentional surrealistic color effect.

Subjects of a monochromatic or distinct white coloring can be intensified or changed completely in its character through the overlay of a dominating exaggerated color.

**Item #.....BWPO( )**

**Pop Filter 442 Purple Pink [Schott RG 6]**  
**Item #.....BWPP( )**

**Pop Filter 461 Green [Schott VG 9]**  
**Item #.....BWPGR( )**

**Pop Filter 480 Blue [Schott BG 12]**  
**Item #.....BWBL( )**

**Pop Filter 490 Red [Schott OG 590]**  
**Item #.....BWPR( )**

**Pop Filter 443 Violet**  
**Item #.....BWPV( )**

### SPECIFICATIONS FOR POP COLOR FILTERS

FILTER	INCREASE F-STOP
Pop Filter 424	1
Pop Filter 442	1½
Pop Filter 461	2
Pop Filter 480	2¼
Pop Filter 490	2½
Pop Filter 443	2-3

*To order Pop Color Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.*

### PRICES FOR POP COLOR FILTERS

FILTER SIZES:	30.5	37	39	40.5	43	46	48	49	52	55	58	60	62	67	72	77
Pop 424, 442, 461	-	-	44.00	-	-	34.00	30.00	31.00	35.00	42.00	43.00	68.00	50.00	61.00	85.00	95.00
Pop 480, 490, 443	-	-	44.00	-	-	34.00	30.00	31.00	35.00	42.00	43.00	68.00	50.00	61.00	85.00	95.00

FILTER SIZES:	82	86	95	105	112	122	B50	B60	B1	B2	B3	B6	S5.5	S7	S8	S9
Pop 424, 442, 461	114.00	112.00	166.00	179.00	211.00	232.00	65.00	99.00	44.00	52.00	58.00	230.00	30.00	38.00	57.00	94.00
Pop 480, 490, 443	114.00	112.00	166.00	179.00	211.00	232.00	65.00	99.00	44.00	52.00	58.00	230.00	30.00	38.00	57.00	94.00

### Color Spot Filters

These filters are made of high-quality CR-39 plastic in several colors. They consist of a circular spot in the center which allows the portrayal of an object in a different colored surrounding. The filter effect can be directly influenced by the f-stop and the focal length. The transformation is soft-er with wider apertures. The size of the clear circular area increases relatively with the selection of longer focal lengths.

**Colorspot 701 Neutral Density (Light Gray)**

This filter consists of a neutral density outer area with a transmission of 50%. The portion outside of the image center can be reproduced one f-stop darker without changing its color.

**Item #.....BWCSND1( )**

**Colorspot 702 Neutral Density (Dark Gray)**

This filter has 25% transmission, resulting in a darkening of 2 f-stops.

**Item #.....BWCSND2( )**

**Colorspot 785 Purple**

**Item #.....BWCSP( )**

**Colorspot 724 Orange**

**Item #.....BWCSO( )**

**Colorspot 743 Violet**

**Item #.....BWCSV( )**

**Colorspot 750 Tabac**

**Item #.....BWCSTO( )**

**Colorspot 760 Yellow Green**

**Item #.....BWCSYG( )**

**Colorspot 761 Green**

**Item #.....BWCSGR( )**

**Colorspot 781 Blue**

**Item #.....BWCSBL( )**

**Colorspot 790 Red**

**Item #.....BWCSR( )**

*To order Color Spot Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.*

### PRICES FOR COLOR SPOT FILTERS

FILTER SIZES:	49	52	55	58	60	62	67	72	77
Clrspot 701, 702, 785, 724, 743, 750, 760, 761, 781, 790	27.00	28.00	30.00	31.00	35.00	34.00	38.00	42.00	50.00



### Filters for Extra-Wide Angle Lenses

Filters for wide-angle lenses are required to prevent mechanical vignetting in corners when using extreme wide-angle lenses. The

glass is larger than the lens diameter. Recommended when the field-angle lenses exceeds 70°. For 35mm cameras, use

with lenses 28mm and shorter. For medium format cameras, use with lenses 50mm and shorter. Most extra-wide filters

will accept a larger front filter, while the filter itself is used as a lens hood.

#### SPECIFICATIONS OF EXTRA-WIDE ANGLE FILTERS

EW FILTER	ACCEPTS FILTER SIZE
49mm	62mm
52mm	67mm
55mm	72mm
58mm	72mm
62mm	77mm
67mm	82mm

*For Slim Filters without any front thread, see page 332*

#### SPECIFICATIONS OF EXTRA-WIDE ANGLE FILTERS

EW FILTER	ACCEPTS FILTER SIZE
72mm	86mm
77mm	92mm
82mm	96mm
86mm	100mm
95mm	105mm
105mm	122mm

*To order Filters for Extra-Wide Angle Lenses, just insert filter diameter (FILTER SIZE in charts below) after the item number of filter desired.*

#### PRICES OF FILTERS FOR EXTRA-WIDE LENSES

FILTER SIZE:	ITEM #	49	52	55	58	62	67	72	77	82	86	95	105
UV Haze 010	BWUV( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
Skylight KR1-5	BWSL( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
Kaesemann Linear Polarizer	BWKP( )EW	125.00	125.00	142.00	156.00	179.00	179.00	217.00	247.00	279.00	298.00	314.00	364.00
Kaesemann Circular Polarizer	BWKP( )EW	142.00	153.00	165.00	176.00	170.00	208.00	239.00	268.00	306.00	326.00	342.00	398.00
Light Yellow 021	BW021( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
Medium Yellow 022	BW022( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
Dark Yellow 023	BW023( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
Yellow Orange 040	BW040( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
Red Orange 041	BW041( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
Yellow Green 060	BW060( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
Green 061	BW061( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
Light Blue 080	BW080( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
Medium Blue 081	BW081( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
Light Red 090	BW090( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
Dark Red 091	BW091( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
81A	BW81A( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
81B	BW81B( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
KR3 Warm	BWKR3( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
KR6 Warm	BWKR6( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
KR12 Warm	BWKR12( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
KR15 Warm	BWKR15( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
KB1.5 Cool	BWKB1.5( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
KB3 Cool	BWKB3( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
KB6 Cool	BWKB6( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
KB12 Cool	BWKB12( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
KB15 Cool	BWKB15( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00
KB20 Cool	BWKB20( )EW	43.00	43.00	48.00	61.00	66.00	68.00	78.00	79.00	94.00	102.00	118.00	143.00

### Multi-Coated Filters

Multi-coated filters maximize the amount of light reaching the film by minimizing the light lost to reflections. When shooting in backlit or side-lit conditions, ghost images frequently appear. This is caused by light reflecting on the surface of the optical glass and subsequently through the filter. Even plain glass will cause a light reduction of approximately 4% per surface.

Stray light or flare produces images with low contrast and a washed-out appearance. This effect is caused by the difference of refraction between glass and air surfaces. In order to equalize this difference in refraction values and provide reflection-free transmission of light through the filter, an anti-reflection coating is applied.

Layers of scratch-resistant metal dioxide vapors are applied in high-vacuum chambers. The thickness of these layers, which appear colorful when light is reflected onto them, is  $\frac{1}{4}$  wavelength or less. Several layers of coatings are applied to reduce reflection over a broad spectrum.

To achieve best results, B+W uses the multi-coating technology developed by Schneider-Kreuznach. They are made of the finest optical glass and can be easily cleaned. In comparison to conventional multi-coated, B+W MC filters offer even better results over a wider spectral range. Residual reflections of less than 1% between 400-650 nanometers are eliminated.

*To order Multi-Coated filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.*

### PRICES OF MULTI-COATED FILTERS

FILTER SIZE:	ITEM #	30.5	35.5	39	46	48	49	52	55	58	60	62	67	72	77	82	86
UV Haze 010	BWUVMC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
Skylight KR1-5	BWSLMC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
Top Polarizer	BWPMC( )	-	-	-	70.95	53.00	49.00	51.00	56.00	58.00	-	59.00	68.00	79.00	84.00	-	-
Circular Polarizer	BWCPMC( )	-	-	-	-	-	73.00	74.00	86.00	87.00	114.00	90.00	109.00	125.00	141.00	-	-
Light Yellow 021	BW021MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
Medium Yellow 022	BW022MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
Dark Yellow 023	BW023MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
Yellow Orange 040	BW040MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
Red Orange 041	BW041MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
Yellow Green 060	BW060MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
Green 061	BW061MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
Light Blue 080	BW080MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
Medium Blue 081	BW081MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
Light Red 090	BW090MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
Dark Red 091	BW091MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
81A Warm	BW81AMC( )	-	-	-	27.00	-	27.00	27.00	30.00	33.00	-	39.00	43.00	55.00	72.00	94.00	97.00
81B Warm	BW81BMC( )	-	-	-	27.00	-	27.00	27.00	30.00	33.00	-	39.00	43.00	55.00	72.00	94.00	-
KR3 Warm	BWKR3MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
KR6 Warm	BWKR6MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
KR12 Warm	BWKR12MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
KR15 Warm	BWKR15MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
KB1.5 Cool	BWKB1.5MC( )	26.00	-	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
KB3 Cool	BWKB3MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
KB6 Cool	BWKB6MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
KB12 Cool	BWKB12MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
KB15 Cool	BWKB15MC( )	-	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00
KB20 Cool	BWKB20MC( )	27.00	37.00	33.00	27.00	27.00	27.00	27.00	30.00	33.00	48.00	39.00	43.00	55.00	72.00	96.00	106.00

# HELIOPAN

## SKY, UV AND POLARIZER FILTERS

Heliopan filters are made exclusively from raw glass supplied by Schott (Zeiss), the world's leading optical glass manufacturer. This guarantees that Heliopan filters are the highest quality possible. The glass is "dyed in the mass" and ground and polished to precise optical plane parallelism, and they are double hard coated on both sides.

All Heliopan filters are mounted in black anodized brass rings to ensure optimal performance and ease of mounting and unmounting. This insures that they meet the high standards which are the basis for the unsurpassed reputation of the German optical industry!

**To order Heliopan filters, just insert filter diameter (FILTER SIZE in charts below) after the item number of filter desired.**

HELIOPAN FILTERS AND CODES			
SIZE	FILTER SIZE	SIZE	FILTER SIZE
30.5mm	30.5	52mm	52
39mm	39	55mm	55
40.5mm	40.5	58mm	58
46mm	46	60mm	60
48mm	48	62mm	62
49mm	49	67mm	67

HELIOPAN FILTERS AND CODES			
SIZE	FILTER SIZE	SIZE	FILTER SIZE
72mm	72	Bay 60 Hass	B60
77mm	77	Bay 3 Rolleiflex	B3
82mm	82	Bay 6 Rolleiflex	B6
86mm	86	Series 6	S6
95mm	95	Series 7	S7
105mm	105	Series 8	S8

### Polarizer Filters

Polarizer filters are used for both black and white and color. These filters eliminate reflections from non metallic objects and glass surfaces, increase contrast and minimize haze in both color and black-and-white photography.

Heliopan polfilter consists of a polarizing foil cemented between two plane-parallel glass discs. They can be revolved in their brass mounts, so that the degree of absorption can be controlled. When the linear polfilter is used with a SLR or groundglass focusing camera, simply rotate the filter until the desired effect is visible. The most effective result is obtained when the camera angle is 30° to 40° to the subject.

All Heliopan polarizing filters are provided with numerical scale on the mount. If it is not possible to view through the lens, the desired effect is achieved by rotating the filter in front of the eye and noting on the numbered scale when the desired effect is obtained. Mount the filter on the lens and rotate the filter until the number is in exactly the same position on the lens as it was when viewed in front of the eye.



Taken without a filter



Taken with a Linear Polarizer Filter

### Linear Polarizer Filter

Linear polarizers are used with most manual focus SLR and rangefinder cameras to increase color saturation and reduce reflections. The neutral gray color and plane parallel polarizer material guarantee optimal image results.

Item #.....HEP( )

### Circular Polarizer Filter

This filter is specially designed to be used with auto-exposure and auto-focus SLR and video cameras. It does not influence the metering systems of these cameras.

Item #.....HECP( )

### Warm Linear Polarizer Filter

This unique filter combines the advantages of a polarizer and a skylight KR1.5 into one filter. It brings together the advantages of both filters in color photography while producing impressive photographs with not only vibrant colors, but also a very pleasing warm tonal quality.

Item #.....HEWP( )

### Warm Circular Polarizer Filter

Same as above, but circular.

Item #.....HEWCP( )

### Sky and Ultraviolet (UV) Filters

**Skylight KR 1.5 (1A) Filter**  
Absorbs UV radiation, reduces bluish cast in scenic photography and adds a pleasant warming effect to portraits. It can also be left on lens all the time for protection.

Item #.....HESL( )

**UV Haze Filter**  
A clear filter with no effect on color, it absorbs UV radiation which appears in most outdoor photographs. It also serves as a protective filter and can be left on lens all the time.

Item #.....HEUV( )

# HELIOPAN

## SKY, UV, POLARIZER AND B&W FILTERS

### Sky, UV and Polarizer Filters, continued

To order Polarizer, Sky and UV Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.

#### PRICES FOR SKY, UV AND POLARIZER FILTERS

FILTER SIZE:	30.5	39	40.5	46	48	49	52	55	58	60	62	67
Skylight KR1.5	35.95	37.95	38.50	33.50	38.50	25.95	26.95	29.95	33.95	46.95	39.95	44.95
UV Haze	35.95	37.95	33.50	33.50	38.50	25.95	26.95	29.95	33.95	46.95	39.95	44.95
Linear Polarizer	49.95	45.95	53.50	47.95	49.95	43.95	44.95	46.95	49.95	69.95	54.95	62.95
Circular Polarizer	69.50	64.50	73.95	69.95	69.95	57.95	61.95	64.95	69.95	84.50	73.95	84.95
Warm Linear Polarizer	-	-	-	-	-	139.95	139.95	164.95	164.95	189.50	174.95	189.95
Warm Circular Polarizer	-	-	-	-	-	169.95	169.95	199.95	199.95	258.50	209.95	239.95

FILTER SIZE:	72	77	82	86	95	105	B60	B3	B6	S6	S7	S8
Skylight KR1.5	54.95	59.95	96.50	119.95	169.95	176.95	133.95	69.50	163.50	39.95	49.50	68.95
UV Haze	54.95	59.95	96.50	119.95	169.95	176.95	133.95	69.50	163.50	39.95	49.50	68.95
Linear Polarizer	69.95	79.95	126.95	163.50	194.50	218.50	-	-	-	-	-	-
Circular Polarizer	99.95	114.95	159.95	189.95	267.95	269.95	-	-	-	-	-	-
Warm Linear Polarizer	199.95	229.95	-	-	-	-	-	-	-	-	-	-
Warm Circular Polarizer	249.95	269.95	-	-	-	-	-	-	-	-	-	-

### Filters for Black and White Film

#### Light Yellow 6

For Outdoor photographs, primarily used as a haze filter. Corrects blue sky and improves contrast.

Item #.....HE6( )

#### Medium Yellow 8

This filter increases visible gray tones of green objects, such as foliage. Dramatically darkens the sky.

Item #.....HE8( )

#### Dark Yellow 15

Darkens the sky and increases penetration of atmospheric haze. Also for infrared photography.

Item #.....HE15( )

#### Yellow Green 11

Universal scenic filter with large green areas. Great for spring and summer.

Item #.....HE11( )

#### Green 13

Ideal for green subjects and outdoor portraits. Useful with high speed film.

Item #.....HE13( )

#### Orange 22

For increased cloud effects, darkens sky and lightens clouds. Significant reduction of atmospheric haze, especially when using long focal length lenses.

Item #.....HE22( )

#### Light Red 25

This filter will almost entirely absorb blue and will emphasize red. Used to increase contrast as well as infrared film for moon light effect. Used for color separations.

Item #.....HE25( )



To order Filters for Black & White Film, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.

#### PRICES FOR BLACK AND WHITE FILM FILTERS

FILTER SIZE:	39	46	49	52	55	58	60	62	67	72	77	82	105	B60	B3	B6
Light Yellow 6	37.95	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	-	-	133.95	69.50	163.50
Medium Yellow 8	37.95	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	96.50	176.95	133.95	69.50	163.50
Dark Yellow 15	37.95	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	-	-	133.95	-	-
Yellow Green 11	37.95	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	-	-	133.95	69.50	-
Green 13	37.95	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	96.50	176.95	133.95	69.50	-
Orange 22	37.95	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	96.50	176.95	133.95	69.50	163.50
Light Red 25	37.95	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	96.50	176.95	133.95	69.50	-

14-Day Customer Satisfaction Guarantee



# HELIOPAN

## COLOR CONVERSION FILTERS

### Conversion Filters for Color

Color conversion filters are used to balance the quality of light to color film. The human eye subjectively registers color, which is directly dependent on the color temperature of the light source and on the quality of the emitted light (direct, indirect, diffused, etc.).

In photography, the measurement unit for color temperature is the Kelvin (K). In the manufacture of color films, the manufacturer must make sure that film emulsions are sensitive to the light source the film is to be exposed by. A change in light intensity from one day to the next means that the color temperature changes, as well.

With the proper use of conversion filters, daylight films (approximately 5000 to 5600 K) can be used with 2400 K lamps (KB 18) to extreme daylight lighting of 20,000 K (KR 13.5) and anything in between. Conversely, tungsten films can also be easily balanced for use under virtually any color temperature from 7500 K (KR 18) to 3000 K (KB 1.5).

To simplify the complicated task of matching a color emulsion to a light

source, Heliopan uses the Decamired system which allows the photographer to simply and easily match emulsion to light source by using one or more filters. With the Decamired system, the warming filters are designated KR and the cooling filters KB. The strength of each filter is designated numerically by progressively higher numbers, i.e. 1.5, 3, 6, etc.

With the Decamired system, every light source is assigned a Decamired value (5500 K = DM 18), and each film emulsion is also assigned a Decamired value (daylight film = DM 18). When using filters calibrated in the Decamired system with daylight film (DM 18) exposed under a cloudy sky (DM 15), one only has to use a filter equal to the shift in warmth "3". Thus, a KR 3 will properly balance daylight film to overcast, cloudy illumination (6,750 K).

For most accurate balancing of color films, a 3-color color temperature meter is essential, but very accurate approximations can be made by simply following shifts between the lighting and film values.

LIGHT SOURCE	COLOR OF LIGHT SOURCE		FILTER REQUIRED-DAYLIGHT FILM		LIGHT SOURCE	COLOR OF LIGHT SOURCE		FILTER REQUIRED-DAYLIGHT FILM	
	COLOR TEMP. (KELVIN)	DECA-MIRED	DM SHIFT	DECAMIRED SYSTEM		COLOR TEMP. (KELVIN)	DECA-MIRED	DM SHIFT	DECAMIRED SYSTEM
DAYLIGHT	5,500 K	18	0	NONE	HEAVY OVERCAST	7,750 K	13	+5	KR 3 + KR 1.5
ELECTRONIC FLASH	6,000 K	17	+1	KR 1.5	OPEN SHADE (HAZY)	10,000 K	10	+8	KR 6 + KR 1.5
LIGHT OVERCAST	6,500 K	15	+3	KR 3	OPEN SHADE (CLEAR)	12,500 K	8	+10	KR 6 + KR 3
OVERCAST	6,750 K	14.5	+3.5	KR 3		20,000 K	5	+13	KR 12

### SPECIFICATIONS FOR WARMING FILTERS

Filter	COLOR TEMP CORRECTED FROM → TO		WRATTEN NUMBER	ITEM NUMBER
KR 1.5 (Skylight)	3400 K	→ 3200 K	1A	HESL( )
KR 3 (Skylight)	3600 K	→ 3200 K	81C	HEKR3( )
KR 6	3900 K	→ 3200 K	81EF	HEKR6( )
KR 12	5500 K	→ 3400 K	85	HEKR12( )
KR 15	5500 K	→ 3200 K	85B	HEKR15( )
81A	3400 K	→ 3200 K	81A	HE81A( )
81B	3500 K	→ 3200 K	81B	HE81B( )

### SPECIFICATIONS FOR COOLING FILTERS

FILTER	COLOR TEMP CORRECTED FROM → TO		WRATTEN NUMBER	ITEM NUMBER
KB 1.5	3000K	→ 3200 K	82A	HEKB1.5( )
KB 3	2800 K	→ 3200 K	82B	HEKB3( )
KB 6	4100 K	→ 5500 K	82C	HEKB6( )
KB 12	3400 K	→ 5500 K	80B	HEKB12( )
KB 15	3200 K	→ 5500 K	80A	HEKB15( )
KB 18	2400 K	→ 5500 K	-	HEKB18( )

### PRICES FOR CONVERSION FILTERS FOR COLOR

FILTER SIZE:	39	46	49	52	55	58	60	62	67	72	77	82	86	105	B60	B3	B6
KR 3	37.95	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	96.50	-	176.95	133.95	69.50	163.50
KR 6	37.95	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	96.50	-	176.95	133.95	69.50	-
KR 12	37.95	33.50	33.50	33.95	37.95	39.50	-	46.95	53.50	64.95	76.95	-	-	-	133.95	-	-
KR 15	37.95	33.50	33.50	33.95	37.95	39.50	-	46.95	53.50	64.95	76.95	-	-	-	133.95	-	-
81A	-	-	-	26.95	30.95	34.95	-	39.95	44.95	54.95	59.95	-	-	-	-	-	-
81B	-	-	-	26.95	30.95	34.95	-	39.95	44.95	54.95	59.95	-	-	-	-	-	-
81C	-	-	-	26.95	30.95	34.95	-	39.95	44.95	54.95	59.95	-	-	-	-	-	-
KB 1.5	37.95	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	-	-	-	133.95	-	-
KB 3	37.95	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	-	-	-	133.95	-	-
KB 6	37.95	33.50	33.50	33.95	37.95	39.50	-	46.95	53.50	64.95	76.95	-	-	-	133.95	-	-
KB 12	37.95	33.50	33.50	33.95	37.95	39.50	-	46.95	53.50	64.95	76.95	-	-	-	133.95	-	-
KB 15	37.95	33.50	33.50	33.95	37.95	39.50	-	46.95	53.50	64.95	76.95	96.50	-	-	133.95	69.50	-
KB 18	37.95	33.50	33.50	33.95	37.95	39.50	-	46.95	53.50	64.95	76.95	-	-	-	133.95	-	-



# HELIOPAN

## SPECIAL EFFECTS FILTERS

### Fluorescent Filters

#### FLD Filter

A light violet filter. Eliminates blue-green tint color produced by daylight film illuminated by fluorescent bulbs.

Item #.....HEFLD( )

### Neutral Density Filters

Neutral density filters are used to cut down the amount of light. They block the entire visible spectrum evenly and allow light reduction without influencing color rendition or contrast. They can also be combined for greater f-stop reduction.

#### Neutral Density ND 0.3

This lightly tinted filter reduces light transmission by one f-stop when there is too much light while using high-speed film.

Item #.....HEND.3( )



Neutral Density ND 0.9 and 0.3

#### Neutral Density ND 0.6

By using this filter, it is possible to use relatively longer shutter speeds while retaining a wide aperture, even in bright illumination. Reduces speed by two f-stops.

Item #.....HEND.6( )

#### Neutral Density ND 0.9

This filter is denser than the ND 0.6 and more light absorbing. It is suited for video, especially when a small enough lens opening is not available. In addition, a specific depth of field limit can be obtained.

Reduces speed by three f-stops. Item #.....HEND.9( )

### Neutral Density Graduated Filters (Resin)

Heliopan Circular Graduated Filters are optical resin stepless process filters which are continuously graduated from clear to the maximum density of the filter.

They have no effect on color, only the density of the light - and are used in cases of extreme contrast to selectively reduce brightness. A sunny sky with clouds above a landscape is often too contrasty to record on film. The sky appears too light, or the landscape too dark.

With the ND-graduated filter, the sky's brightness is modified, and the excess contrast is controlled.

#### Graduated ND 0.3 (ND2X)

Item #.....HEGND.3( )

#### Graduated ND 0.6 (ND4X)

Item #.....HEGND.6( )

Graduated ND filters are also available in Square and Rectangular sizes.

### Soft Focus Effects/Close-Up Lenses

Soft Focus filters are popular lens attachments. They are used for a variety of applications, such as lowering contrast, creating halo effects around highlights and creating a mist effect while the lens aperture remains unaffected.

#### Soft Focus 1

The Soft Focus filters reduce contrast and create a soft halo around the highlights. They are also ideal for creating a hint of softness or blurred contours. Their effect is based on concentric rings in the glass and can be enhanced by opening up or reduced by closing down the aperture.

Item #.....HESF1( )

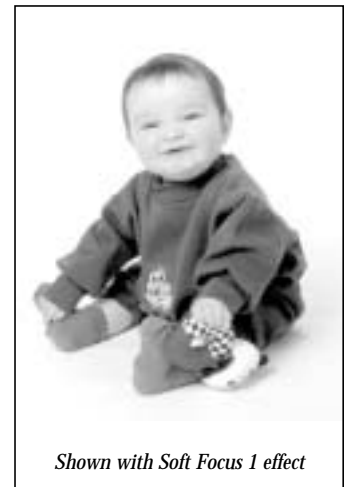
#### Soft Focus 2

Same as above, with further reduced contrast.

Item #.....HESF2( )



Taken without any filter



Shown with Soft Focus 1 effect

#### Heliopan Zeiss Softar 1

The Heliopan Softar 1 is a special lens with a built-in mini-diffuser lens. It is the optimum in a soft focus lens. In comparison with other diffusers, the Zeiss Softar 1 can be used at any aperture for greater depth-of-field without changing the softness. Great for portraits. It can be combined with the Softar 2.

Item #.....HEZS1( )

#### Heliopan Zeiss Softar 2

Same as above, with slightly more effect.

Item #.....HEZS2( )

#### 4x Cross Screen (Star)

Spaced-apart engraved lines produces a 4-pointed star from a pointed light source. It also diffuses the image slightly. Most effective when used with longer focal lenses. Highly recommended for video.

Item #.....HECS4( )



Heliopan Zeiss Softar 2

#### 6x Cross Screen

Same as above, but creates a 6-pointed star.

Item #.....HECS6( )

#### Close-Up 2

Single element diopter lens enables focusing on subjects much closer than the standard lens allows. Great for detail photos of nature subjects and a wide range of situations.

Item #.....HECU2( )

#### Close-Up 3

Same as above, with stronger magnification.

Item #.....HECU3( )

# HELIOPAN

## SPECIAL EFFECT FILTERS

Fluorescent/Neutral Density/Soft Focus Effects/Close-Up Lenses

*To order, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.*

### PRICES FOR HELIOPAN FILTERS

FILTER SIZE:	46	49	52	55	58	60	62	67	72	77	B60
Fluorescent FLD	44.95	44.95	47.95	58.50	62.95	69.95	69.95	84.95	96.50	124.50	168.95
Neutral Density ND 0.3	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	133.95
Neutral Density ND 0.6	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	133.95
Neutral Density ND 0.9	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	133.95
Graduated ND 0.3	—	71.95	71.95	77.95	83.50	—	88.50	89.95	102.50	123.95	149.95
Graduated ND 0.6	—	71.95	71.95	77.95	83.50	—	88.50	89.95	102.50	123.95	149.95
Soft Focus 1	44.95	44.95	47.95	58.50	59.95	69.95	69.95	84.95	96.50	124.50	168.95
Soft Focus 2	44.95	44.95	47.95	58.50	59.95	69.95	69.95	84.95	96.50	124.50	168.95
Zeiss Softar 1	—	—	169.95	179.95	179.95	—	179.95	194.95	194.95	221.95	—
Zeiss Softar 2	—	—	169.95	179.95	179.95	—	179.95	194.95	194.95	224.95	—
Cross Screen 4x	54.50	54.50	54.50	57.50	62.95	—	69.95	78.50	89.50	109.95	156.50
Cross Screen 6x	54.50	54.50	54.50	57.50	62.95	—	69.95	78.50	89.50	109.95	156.50
Close-Up 2	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	133.95
Close-Up 3	33.50	33.50	33.95	37.95	39.50	46.95	46.95	53.50	64.95	76.95	133.95

### Graduated Neutral Density Center Filters

Used for wide-angle view lenses. They are neutral gray, concentric graduated filters which have high density at the center and are transparent at the rim. The course of the density is selected so that the light fall-off of the image circle will be compensated at f/16. As a result of the working aperture, you will have a uniform image field illumination. Center filters are double threaded with a larger front thread to accommodate larger size filters. Since these filters are used for extreme wide-angle lenses, this avoids vignetting.

### NEUTRAL DENSITY SPECIFICATIONS

SIZE (in)	MM	GRADUATED	INCREASE MAXIMUM F-STOP	MFG #	ITEM #	PRICE
3x4.8	75x120	ND 0.3 (2x)	1	710-167	HEGND.3348	279.50
3x4.8	75x120	ND 0.6 (4x)	2	710-168	HEGND.6348	279.50
3x4.8	75x120	(6x)	2½	710-169	HEGND.9348	279.50
4x6	100x150	ND 0.3 (2x)	1	710-267	HEGND.346	353.50
4x6	100x150	ND 0.6 (4x)	2	710-268	HEGND.646	353.50
4x6	100x150	(6x)	2½	710-269	HEGND.946	353.50

### HELIOPAN BRASS ROTATING FILTER HOLDERS for RECTANGULAR GLASS ND FILTERS

FITS SIZE	LENS SIZE	ITEM	MFG #	ITEM #	PRICE
3x4.8"	77	77mm Rotating Filter Holder	706-106	HEFH77	119.50
4x6"	105	105mm Rotating Filter Holder	706-107	HEFH105	159.95

*To fit Rotating Filter Holders onto other lens sizes, a Stepping Ring is required; see Stepping Rings.*

### GRADUATED NEUTRAL DENSITY CENTER FILTER SPECIFICATIONS

FILTER	FRONT ACC. SIZE	INCREASE MAX. F-STOP	MFG #	ITEM #	PRICE	FILTER	FRONT ACC. SIZE	INCREASE MAX. F-STOP	MFG #	ITEM #	PRICE
49mm ND Center Filter 3x	67mm	1½	704951	HECF349	164.95	67mm ND Center Filter 3x	86mm	1½	706751	HECF367	252.95
52mm ND Center Filter 3x	67mm	1½	705251	HECF352	164.95	77mm ND Center Filter 3x	105mm	1½	707751	HECF377	319.95
55mm ND Center Filter 3x	67mm	1½	705551	HECF355	149.95	82mm ND Center Filter 3x	105mm	1½	708251	HECF382	319.95
58mm ND Center Filter 3x	77mm	1½	705851	HECF358	249.95	95mm ND Center Filter 3x	105mm	1½	709551	HECF395	367.95



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With its production of high-precision glass products, Hoya's Optical Division continually answers industry demands with new developments. Many new glass materials that feature highly sophisticated functions have come about as the direct result of advanced research accumulated over the years. These products, through the revolutionary manufacturing system, have made Hoya an industry leader.

### Filters for Color Films

The human eye adapts to different light sources. If we look at a piece of white paper outdoors, then bring it indoors under artificial light, it will appear reddish, before slowly regaining its original white. Even when wearing colored sunglasses, white paper appears white to us. This ability is absent in photographic films, because they are made to respond only to certain types of light. Thus, pictures taken with color film sometimes appear too red or blue, depending on the color temperature of the light source. Correction then becomes necessary. This is the main reason why filters are necessary in color photography.

### Filters for Black and White Films

Beginners often take photographs which include a beautiful blue sky and white clouds, only to be disappointed because the entire sky appears white in finished prints. In other cases, colors are rendered with an unnatural balance between the tones in black and white photographs. All this is due to the fact that film does not respond to the various colors in the same way as does the human eye. The role of filters for black and white film is to correct picture contrast. Selecting the proper filter can render white clouds vividly bright against a dark sky, or make the tones of colored objects appear balanced and natural.

### Filters for Special Effects

These filters produce special effects that allow a wide range of emotional expression in photographs. Special effect techniques can be used with both movie and still cameras by merely attaching them to the front of the lens like ordinary filters. Special effect filters can also be combined with other types of filters for an endless variety of new effects. By understanding the nature of filters for color and for black and white films and special effect filters, you will be able to greatly advance the development of your photographic technique.

*To order Hoya Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.*

#### HOYA FILTER SPECIFICATIONS

SIZE	CODE	SIZE	CODE	SIZE	CODE	SIZE	CODE	SIZE	CODE
27mm	27	40.5mm	40.5	49mm	49	62mm	62	82mm	82
37mm	37	43mm	43	52mm	52	67mm	67	95mm	95
39mm	39	46mm	46	55mm	55	72mm	72	Bay 50 Hass	B50
		48mm	48	58mm	58	77mm	77	Bay 60 Hass	B60

#### Sky, UV Protector and Polarizer Filters

##### Skylight (1B)

Reduces the excessive bluishness that frequently occurs in outdoor color photography. It provides great outdoor shots with superb color balance and clarity under all conditions. Keeps skin tones free of colored reflections from nearby objects. Also serves as a permanent lens protector.  
Item #.....HOSL( )

##### Ultraviolet (0)

Absorbs the ultraviolet rays which often makes outdoor photographs hazy and indistinct. A multi-purpose fine weather filter for color, as well as black and white films. Also serves as a permanent lens protector.  
Item #.....HOUV( )

##### Polarizer

Eliminates undesired reflections from non-metallic surfaces. Great for color photography. For b&w photography, the effect is the same as with the yellow (K2) and orange (G) filters. Also provides an infrared effect when used together with a R(25A) red filter.  
Item #.....HOP( )

##### Circular Polarizer

Similar to an ordinary polarizing filter, except the light rays are circular, not linear, after passing through the filter. Avoids possible exposure errors caused by the slight polarizing of light by autofocus and TTL cameras using fixed mirrors.  
Item #.....HOCP( )

*To order Sky, UV Protector and Polarizer Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.*

#### PRICES FOR SKY, UV AND POLARIZER FILTERS

FILTER SIZE:	27	37	39	40.5	43	46	48	49	52	55	58	62	67	72	77	82	95	B50	B60
Skylight 1B	—	—	20.95	20.95	14.95	10.50	6.95	9.95	9.95	9.95	11.95	18.95	18.95	27.95	32.95	44.95	79.50	55.50	64.50
Ultraviolet	—	9.95	20.95	20.95	20.95	10.50	6.95	9.95	9.95	9.95	11.95	18.95	18.95	27.95	32.95	44.95	79.50	55.50	64.50
Polarizer	—	—	29.95	29.95	29.95	16.95	—	16.95	16.95	16.95	19.95	22.95	22.95	34.50	40.50	52.50	85.50	—	74.95
Circular Polarizer	29.95	29.95	—	29.95	29.95	28.95	—	29.95	29.95	29.95	34.50	49.50	49.50	59.95	70.50	92.95	—	—	—

## F I L T E R S F O R C O L O R F I L M

### 80 Series Cool Filters (80A, 80B, 80C)

These are color conversion filters for the use of daylight type color films with artificial light sources. 80A increases the color temperature from 3200°K to 5500°K for use with 3200°K lamps.

80B increases the color temperature from 3400°K to 5500°K for the use of photoflood lamps. 80C increases the color temperature from 3800°K to 5500°K for the use of clear flash bulbs.

80A Filter  
Item # .....HO80A( )

80B Filter  
Item # .....HO80B( )

80C Filter  
Item # .....HO80C( )

### 82 Series Cool Filters (82A, 82B, 82C)

These are light balancing filters used to increase the color temperatures slightly for a cooler (blue) tone. Corrects the tendency toward reddish tones. As an example, select the 82B when using tungsten Type B film

(3200°K) with ordinary household 100ws electric bulbs (2900°K). These series filters are also used to prevent the reddish tones in early morning or late evening light for natural skin tones.

82A Filter  
Item # .....HO82A( )

82B Filter  
Item # .....HO82B( )

82C Filter  
Item # .....HO82C( )

### 85 Series Warm Filters (85, 85B, 85C)

These are color conversion filters for the use of tungsten type color films in daylight.

85 Filter  
Decreases color temperature from 5500°K to 3400°K. For Type A color films.  
Item # .....HO85( )

85B Filter  
Decreases color temperature from 5500°K to 3200°K. For Type B color films.  
Item # .....HO85B( )

85C Filter  
Decreases color temperature from 5500°K to 3800°K. Same effect as daylight films used in daylight.  
Item # .....HO85C( )

### 81 Series Warm Filters (81A, 81B, 81C)

These are light balancing filters used to decrease the color temperature slightly for a warmer (redder) tone.

81A Filter  
Will balance daylight film when used with an electronic flash.  
Item # .....HO81A( )

81B Filter  
For using tungsten Type B color film (3200°K) with photoflood lamps (3400°K).  
Item # .....HO81B( )

81C Filter  
For balancing Type A or Type B film with a clear flash.  
Item # .....HO81C( )

### LIGHT BALANCING FILTER SPECIFICATIONS

FILTER		KELVIN	FILTER		KELVIN	FILTER		KELVIN	FILTER		KELVIN
80A	COOLS	2300°	82A	COOLS	200°	85	WARMS	2100°	81A	WARMS	230°
80B	COOLS	2100°	82B	COOLS	300°	85B	WARMS	2300°	81B	WARMS	240°
80C	COOLS	1700°	82C	COOLS	400°	85C	WARMS	1700°	81C	WARMS	250°

*To order Filters for Color Film, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.*

### PRICES FOR COLOR FILM FILTERS

FILTER SIZE:	39	40.5	43	46	49	52	55	58	62	67	72	77	82	95	B50	B60
80A,80B,80C	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	97.50	59.95	74.95
82A,82B,82C	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	97.50	59.95	74.95
85,85B,85C	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	97.50	59.95	74.95
81A,81B,81C	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	*97.50	59.95	74.95

\* Not Available for 81B



### Filters for Black and White Film

#### Yellow (K2)

The yellow K2 filter is especially useful for clear contrast between blue sky with clouds and foreground. Provides a natural tone rendition. Often used for subjects at intermediate distances.

Item #.....HOY( )

#### Orange (G)

This filter increases contrast between reds and yellows. Particularly useful for distant outdoor shots taken with a telephoto lens. Also useful in color photography for spectacular sunsets, seascapes, etc.

Item #.....HOO( )

#### Red (25A)

The Red 25A filter is especially effective for increasing contrast. It is ideal for dramatic cloud effects in landscapes. Can also be applied creatively in color and infrared photography.

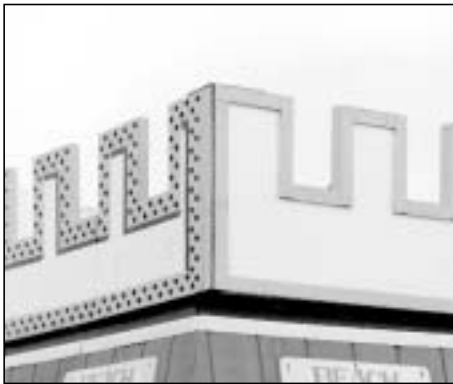
Item #.....HOR( )

#### Yellow Green (X0), Green (X1)

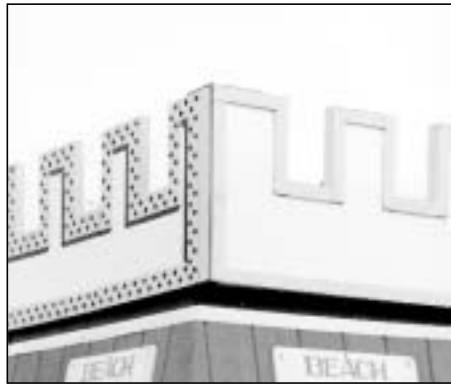
Yellow Green is highly effective for outdoor portraits. It corrects skin tones, and emphasizing the feeling of liveliness. Green is highly effective for indoor portraits under tungsten lighting.

Yellow Green #.....HOYG( )

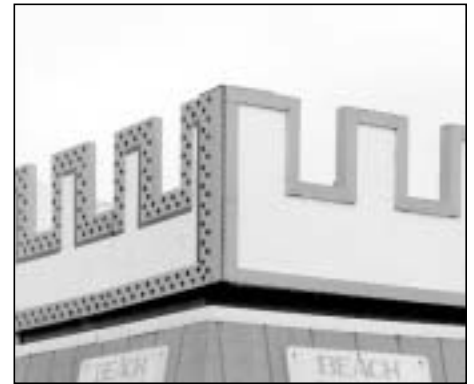
Green #.....HOG( )



Taken without a filter



Taken with a Yellow (K2) Filter



Taken with a Red (25A) filter

**To order Filters for Black and White Film, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.**

### PRICES FOR BLACK AND WHITE FILM FILTERS

FILTER SIZE:	39	40.5	43	46	49	52	55	58	62	67	72	77	82	95	B50	B60
Yellow	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	97.50	59.95	74.95
Orange	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	97.50	59.95	74.95
Red	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	97.50	59.95	74.95
Yellow Green	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	97.50	59.95	74.95
Green	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	97.50	59.95	74.95

### Fluorescent Filters for Color Film

Fluorescent filters are used to correct the greenish tone that appears when daylight type films are used under fluorescent lighting.

FL-DAY is for use with daylight type fluorescent lamps. FL-W is for use with warm or white type fluorescent lamps.

#### Fluorescent FL-Day

Item #.....HOFLD( )

#### Fluorescent FLW

Item #.....HOFLW( )

**To order Fluorescent Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.**

### PRICES FOR FLUORESCENT FILTERS

FILTER SIZE:	46	49	52	55	58	62	67	72	77
FL-Day	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95
FLW	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95

**Most Orders Shipped Within 24 Hours**

## N . D . / C L O S E U P / S P E C I A L E F F E C T S F I L T E R S

### Neutral Density Filters

Neutral density filters are used to control the amount of light entering the camera lens. This adjusts film speed, lowers the shutter speed for special effects and decreases the depth-of-field.

**ND 2x**  
Reduces 1 f-stop.  
Item #.....**HOND2**( )

**ND 4x**  
Reduces 2 f-stops.  
Item #.....**HOND4**( )

**ND 8x**  
Reduces 3 f-stops.  
Item #.....**HOND8**( )

### Close-Up Lenses

Hoya Close-up lenses are single element diopter lenses that enable focusing on subjects much closer than the standard lens allows. Great for detail, photos of nature subjects and a wide range of situations.

#### Split Field

One-half of a close-up lens with the other half open. One half of the picture receives a close-up effect, while the other half is normal. Both very close and far subjects can be in focus at the same time. Or, one half of the picture can be out of focus for special effects.

Item #.....**HOSF**( )

#### Close-Up Lens Set

Includes Close-Up #1, 2 and #4. Can be combined in any combination, up to +7.

Item #.....**HOCUS**( )

#### Macro Close-Up (+10)

Two elements in two group, the Macro Close-Up +10 is a diopter for extreme close-ups. Resolution is outstanding and focusing is possible at 4" (10cm). For super close-ups of insects, flowers and other small objects. The magnification is about 1:2 with a 50mm standard lens (35mm camera), equivalent to a 100mm telephoto lens. The lens should be stopped down as much as possible to get maximum depth-of-field.

Item #.....**HOMCU**( )

To order Neutral Density Filters, or Close-Up Lenses just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.

### NEUTRAL DENSITY AND CLOSE-UP FILTERS

FILTER SIZE:	39	40.5	43	46	49	52	55	58	62	67	72	77	82	95	B50	B60
ND 2x	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	—	59.95	74.95
ND 4x	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	97.50	59.95	74.95
ND 8x	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	97.50	59.95	74.95
Split Field	—	—	—	—	29.95	29.95	29.95	32.95	35.95	35.95	44.95	—	—	—	—	—
Close-Up Set	—	—	—	—	34.50	34.50	34.50	39.95	54.95	54.95	74.95	82.50	—	—	49.95	—
Macro Close-Up	—	—	—	—	74.95	74.95	74.95	—	—	—	—	—	—	—	—	—

### Special Effects (Spot) Filters

#### Center Spot

A close-up lens with a hole in the center. The outside of the picture is a delicate soft focus effect, while the central image is sharply in focus.

Item #.....**HOCS**( )

#### Color Spot

A colored glass filter with a hole in its center.

**Color Spot Green**  
Item #.....**HOCSG**( )

**Color Spot Yellow**  
Item #.....**HOCSY**( )

**Color Spot Red**  
Item #.....**HOCSR**( )

**Color Spot Gray**  
Item #.....**HOCSGR**( )



Taken with a Soft Spot (Sand)

#### Soft-Spot Set (Sand Screen & Soft Screen)

Both have a clear center spot which makes the central image stand out clearly. *Sand Screen* has a smoky appearance while *Soft-Spot* has an irregularly uneven surface, with the size of the clear part in the center varying, depending upon the lens and aperture used.

Item #.....**HOSSS**( )

#### Misty Spot Filters

Four types available: *Breeze*, *Gradual*, *Halo* and *Windmill*. They have a sharp central image with a pleasant blurring of the outer field. With *Gradual*, blurring appears to emanate from the center. *Breeze* has a unidirectional streaky blurring of background. With *Windmill*, blurring appears to swirl about the center, while with *Halo*, blur appears to radiate from a single point at the edge of the field.

#### Misty Spot Breeze

Item #.....**HOMSB**( )

#### Misty Spot Halo

Item #.....**HOMSH**( )

#### Misty Spot Gradual

Item #.....**HOMSG**( )

#### Misty Spot Windmill

Item #.....**HOMSW**( )



Misty Spot Breeze, Misty Spot Gradual, Misty Spot Halo, Misty Spot Windmill

Special Effects Filters, continued

PRICES FOR SPECIAL EFFECT (SPOT) FILTERS

FILTER SIZE:	49	52	55	58	62	67	72	77
Center Spot	19.50	19.50	19.50	20.95	26.95	26.95	34.50	—
Color Spot Green	32.95	32.95	32.95	37.50	46.50	46.50	55.50	68.95
Color Spot Yellow	32.95	32.95	32.95	37.50	46.50	46.50	55.50	68.95
Color Spot Red	32.95	32.95	32.95	37.50	46.50	46.50	55.50	68.95
Color Spot Gray	32.95	32.95	32.95	37.50	46.50	46.50	55.50	68.95
Soft-Spot (Set)	29.95	29.95	29.95	34.50	44.95	44.95	53.95	55.95
Misty Spot Breeze	20.95	20.95	20.95	—	—	—	—	—
Misty Spot Gradual	20.95	20.95	20.95	—	—	—	—	—
Misty Spot Halo	20.95	20.95	20.95	—	—	—	—	—
Misty Spot Windmill	20.95	20.95	20.95	—	—	—	—	—

Special Effects (Half Color, Graduated Color, Dual Color) Filters

**Half Color**

Half color and half clear filter, mounted in a rotating frame. Available in half color blue, brown, emerald, light gray, dark gray, orange, pink, red, violet and yellow. Used for creative color effects.

**Half Color Blue**

Item #.....HOHCBL( )

**Half Color Orange**

Item #.....HOHCO( )

**Half Color Brown**

Item #.....HOHCBR( )

**Half Color Pink**

Item #.....HOHCP( )

**Half Color Emerald (Green)**

Item #.....HOHCGR( )

**Half Color Red**

Item #.....HOHCR( )

**Half Color Light Gray**

Item #.....HOHCLG( )

**Half Color Violet**

Item #.....HOHCV( )

**Half Color Dark Gray**

Item #.....HOHCDG( )

**Half Color Yellow**

Item #.....HOHCY( )

**Dual Color**

A two color, half each Orange/Green, Yellow/Pink or Red/Blue. Made by sandwiching gelatin filters between two pieces of optical glass, mounted in a rotating frame. Can be used for creative color effects.

**Dual Color Orange/Green**

Item #.....HODCOG( )

**Dual Color Red/Blue**

Item #.....HODCRB( )

**Dual Color Yellow/Pink**

Item #.....HODCYP( )

**Gradual (Graduated) Color**

These are acrylic filters similar to half-color, except that color density gradually decreases near the center of the filter, allowing to emphasize foregrounds or backgrounds. Mounted in a rotated frame, 7 colors are available. Blue, Emerald, Gray, Mauve, Pink, Tobacco and Yellow. Color gradually fades out so that the boundary between the colored and transparent sections will not become apparent, even with the lens aperture stopped down.

**Grad Color Blue**

Item #.....HOGBL( )

**Color Grad Pink**

Item #.....HOGP( )

**Grad Color Emerald**

Item #.....HOGEL( )

**Color Grad Tobacco**

Item #.....HOGTO( )

**Grad Color Gray**

Item #.....HOGG( )

**Color Grad Yellow**

Item #.....HOGY( )

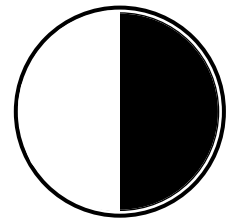
**Color Grad Mauve**

Item #.....HOGM( )

**Dual Image**

Half clear, half black filter. Used to take double exposures. The first half is exposed, and the filter is then rotated and exposed again on the same frame.

Item #.....HODI( )



To order Special Effect Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.

PRICES FOR SPECIAL EFFECT (IMAGE/HALF COLOR/GRADUAL/DUAL) FILTERS

FILTER SIZE:	49	52	55	58	62	67	72	77
Half Color (Specify Color)	29.95	29.95	29.95	35.95	34.95	38.95	52.50	-
Dual Color (Specify Color)	29.95	29.95	29.95	32.95	-	-	-	-
Grad Color (Specify Color)	19.50	19.50	19.50	20.95	-	-	-	-
Dual Image	28.50	28.50	28.50	31.50	40.50	40.50	47.95	58.50



## S P E C I A L E F F E C T F I L T E R S

### Special Effects (Fog, Diffusers, Softener, Spectral Cross, Cross Screen) Filters

#### Fog Filters

Fog filter lightly veils the entire picture in white. Available in fog A and fog B. Fog B has a stronger effect than fog A. Both can be used together to produce an effect similar to dense fog. The effect can be varied by changing the aperture of the lens, but stopping down too far will reduce the effect.

Fog A  
Item #.....HOFA( )

Fog B  
Item #.....HOFB( )

Fog Filter Set  
Item #.....HOFS( )

#### Diffuser Filter

A diffuser filter gives an overall soft-focus effect, due to its irregular uneven surface.

Item #.....HOD( )

#### Duto Filter

A Duto filter is similar to a diffuser, with the center of the picture usually sharper - due to its fine concentric lines etched on its surface.

Item #.....HOD( )Q

#### Softener Filter

The surface of this filter resembles minute droplets of water. This scatters light and results in a soft focus image, creating a picture with a clear focus and soft gradation. Available in A and B. Softener B has a stronger effect than Softener A.

Soft A  
Item #.....HOSA( )

Soft B  
Item #.....HOSB( )

#### Spectral Cross

Sandwiched black gauze-like fiber between two pieces of colorless, transparent optical glass in a rotating frame. Produces both soft-focus and cross effects. Soft-focus effect is obtained for portraits, outdoors with direct lighting, while back lighting or point light sources at night create heightened cross effects. The effect is somewhat softer than with cross screen, and diffraction of light produces a slight amount of flare.

Item #.....HOSC( )

#### Cross Screen (Star 4)

Can be used as a soft focus filter. Also adds a dramatic four cross flare to very bright areas. Ideal for photographing jewelry or objects with strong reflections.

Item #.....HOCSA( )

**To order Special Effect Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.**

### PRICES FOR SPECIAL EFFECT (FOG/DIFFUSER/SOFTENER/CROSS/CROSS SCREEN) FILTERS

FILTER SIZE:	39	40.5	43	46	49	52	55	58	62	67	72	77	82	B50	B60
Fog A or B	-	-	-	-	20.95	20.95	20.95	22.50	-	-	-	-	-	-	-
Fog Set A & B	-	-	-	-	37.50	37.50	37.50	44.95	56.95	56.95	67.50	83.95	-	-	-
Diffuser	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	59.95	74.95
Duto	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	59.95	74.95
Softener A or B	-	-	-	-	25.50	25.50	25.50	28.50	41.95	41.95	47.95	50.95	-	-	-
Spectral Cross	-	-	-	-	28.50	28.50	28.50	29.95	-	-	-	-	-	-	-
Cross Screen (Star 4)	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	59.95	74.95

### Special Effects (Color Polarizers) Filters

The color polarizer filters are a combination of gray polarizer and a combined choice of four colors, orange, red, yellow or blue. Any color from gray to the full color of the filter can be obtained by rotating the filter.

PL Color Orange  
Item #.....HOPO( )

PL Color Yellow  
Item #.....HOPY( )

PL Color Red  
Item #.....HOPR( )

PL Color Blue  
Item #.....HOPBL( )

**To order Special Effect Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.**

### PRICES FOR SPECIAL EFFECT (COLOR POLARIZER) FILTERS

FILTER SIZE:	49	52	55	58	62	67	72
PL Color (Specify Color)	53.95	53.95	53.95	59.95	73.50	73.50	86.95

### Special Effects (Polarizers) Filters, *continued*

#### Pol-Fader

A combination of two gray polarizing filters set in independently rotating frames. Rotating the frames varies the amount of light passed. Useful with exceptionally strong light sources, such as in solar photography, scientific applications, etc. Can also be used with video and cine cameras as a fade out tool.  
**Item #.....HOVF( )**

#### Vario PL-Color

This filter is a combination of one gray polarizing filter and two-colored polarizing filters, red-blue, red-green, yellow-blue, yellow-green or yellow-red. The color can be varied by rotating the filter frames. Many color possibilities help create new emotional effects never seen before.

**Vario PL Red-Blue**  
**Item #.....HOVPRB( )**

**Vario PL Yellow-Green**  
**Item #.....HOVPYG( )**

**Vario PL Yellow-Red**  
**Item #.....HOVPYR( )**

**Vario PL Red-Green**  
**Item #.....HOVPRG( )**

**Vario PL Yellow-Blue**  
**Item #.....HOVPYB( )**

PRICES FOR SPECIAL EFFECT (POLARIZER) FILTERS				
FILTER SIZE:	49	52	55	58
Pol-Fader	43.50	43.50	43.50	-
Vario PL Color (Specify color)	55.50	55.50	55.50	59.95

**To order Special Effect Filters, just insert filter diameter (FILTER SIZE in chart above) after the item number of filter desired.**

### Star Filters

#### Cross Filter (Star 4)

Can be used as a soft focus filter. Also adds a dramatic four cross flare to very bright areas. Ideal for photographing jewelry or objects with strong reflections.  
**Item #.....HOCS4( )**

**Star 6**  
 6 pointed stars from bright, reflective objects. Rotatable.  
**Item #.....HOS6( )**

**Star 8**  
 8 pointed stars from bright and reflective objects. Rotatable.  
**Item #.....HOS8( )**

**Variocross**  
 Two colorless glass plates with etched parallel lines on each surface and set in independent rotating frames. By rotating these frames, the effect can be varied to produce any desired expression for any highly reflective scene.  
**Item #.....HOVC( )**

Taken with a Star 4 filter

Taken with a Star 6 filter

Taken with a Star 8 filter



**To order Special Effect Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.**

### PRICES FOR SPECIAL EFFECT (SPLIT/STARS) FILTERS

FILTER SIZE:	39	40.5	43	46	49	52	55	58	62	67	72	77	82	B50	B60
Cross Star 4	20.95	20.95	20.95	14.95	14.95	14.95	14.95	17.95	26.95	26.95	34.50	41.95	52.50	59.95	74.95
Star 6	-	-	-	-	20.95	20.95	20.95	23.95	34.50	34.50	40.50	44.95	-	-	-
Star 8	-	-	-	-	20.95	20.95	20.95	23.95	34.50	34.50	40.50	44.95	-	-	-
Vario Cross	-	-	-	-	50.95	50.95	50.95	50.95	-	-	-	-	-	-	-

## SPECIAL EFFECTS AND MULTICOATED FILTERS

### Special Effects (Multivision) Filters

Made of optical glass precisely cut into a variety of facets, mounted in a rotatable mount. Multivision helps create exotic, fantastic compositions of color patterns and combinations. Effect is strongest with relatively dark background and at larger apertures. The multi-images appear closer together with wide-angle lenses and farther apart with telephoto lenses.

#### Multivision 3-Facet

Item #.....HOMV3F( )

#### Multivision 3-Parallel Facet

Item #.....HOMV3PF( )

#### Vario Multivision

Two 2-face Multivisions set in independent rotating frames. Creates multi-images that can vary from 2 to 4-face by rotating the frames.  
Item #.....HOVMV( )

#### Multivision 5-Facet

Item #.....HOMV5F( )

#### Multivision 6-Facet

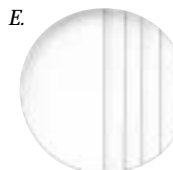
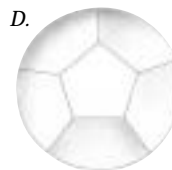
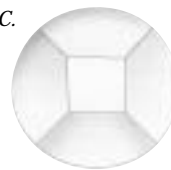
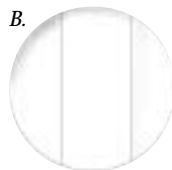
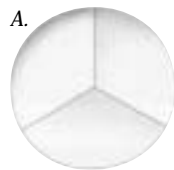
Item #.....HOMV6F( )

#### Multivision 6-Parallel Facet

Item #.....HOMV6PF( )

### MULTIVISION FILTERS

FILTER SIZE:	49	52	55	58	62	67	72	77
Multivision 3F	44.95	44.95	44.95	50.95	67.50	67.50	82.50	88.50
Multivision 3PF	44.95	44.95	44.95	50.95	67.50	67.50	82.50	88.50
Multivision 5F	50.95	50.95	50.95	56.95	82.50	82.50	101.95	104.95
Multivision 6F	55.50	55.50	55.50	71.95	86.95	86.95	109.50	119.95
Multivision 6PF	55.50	55.50	55.50	71.95	86.95	86.95	109.50	119.95
Vario MultiVision	74.95	74.95	74.95	—	—	—	—	—



A. 3F  
B. 3PF  
C. 5F  
D. 6F  
E. 6PF

### Multi-Coated Filters

Minimize light reflections on the filter surfaces to reduce ghost and flare by allowing more light to pass through. The result is sharp contrast and well balanced color. A must for obtaining the performance built into multi-coated lenses. The types of Hoya multi-coated filters are shown below.

### PRICES FOR MULTI-COATED FILTERS

FILTER SIZE:	ITEM #	46	49	52	55	58	62	67	72	77	82	B60
Skylight 1B (HMC)	HOSLMC( )	14.95	14.95	14.95	14.95	17.95	25.50	25.50	32.95	38.95	50.95	74.95
Ultraviolet (HMC)	HOUVMC( )	14.95	14.95	14.95	14.95	17.95	25.50	25.50	32.95	38.95	50.95	74.95
Circular Polarizer (HMC)	HOCPMC( )	54.95	54.95	54.95	54.95	59.95	74.95	74.95	99.95	134.95	199.95	-
Yellow K2 (HMC)	HOYMC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
Orange G (HMC)	HOOMC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
Red 25A (HMC)	HORMC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
Yellow Green XO (HMC)	HOYGMC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
Green X1 (HMC)	HOGPMC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
80A (HMC)	HO80AMC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
80B (HMC)	HO80BMC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
81A (HMC)	HO81AMC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
81B (HMC)	HO81BMC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
82A (HMC)	HO82AMC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
85 (HMC)	HO85MC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
85B (HMC)	HO85BMC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
ND 2X (HMC)	HOND2MC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
ND 4X (HMC)	HOND4MC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	53.95	-
FL-Day (HMC)	HOFDMC( )	-	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	-	-
FL-W (HMC)	HOFWMC( )	19.50	19.50	19.50	19.50	22.50	31.50	31.50	37.50	44.95	-	-
Close-Up Set (HMC)	HOCUSMC( )	49.50	49.50	49.50	49.50	55.50	74.95	74.95	-	-	-	-

# HOYA

## FILTERS

GLASS FILTERS

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### Super Multi Coated Filters

These filters use the highest quality coating process in the industry to match the performance of professional lenses made today. The Hoya super multicoated filters have a unique seven layer multicoating (HMC) applied to its rear surface. This is necessary to eliminate any internal reflections which cause ghosting within the camera lens; the end result is clearer, sharper images. (Multicoating of the front surface is not necessary because difference in light transmission is negligible.)

#### Skylight (1B)

Reduces the excessive bluishness that frequently occurs in outdoor color photography. It provides great outdoor shots with superb color balance and clarity under all conditions. Keeps skin tones free of colored reflections from nearby objects. Also serves as a permanent lens protector.

Item #.....HOSLSMC( )

#### Ultraviolet (0)

Absorbs the ultraviolet rays which often makes outdoor photographs hazy and indistinct. A multi-purpose fine weather filter for color, as well as black and white films. This filter can also serve as a permanent lens protector.

Item #.....HOUVSMC( )

#### Ultra Thin Circular Polarizer

Eliminates undesired reflections from non-metallic surfaces. Similar to an ordinary polarizing filter, except the light rays are circular, not linear, after passing through the filter. One of its most noticeable features is its ultra-thin profile. The front female threading has been removed making the Super CIR-Polarizer only 5mm thin. This low profile means that there is no chance of any vignetting, a problem many photographers run into when using today's ultra wide angle lenses with thicker traditional polarizers.

Item #.....HOCPSMC( )

#### Neutral Density 2x

Neutral density filters are used to control the amount of light entering the camera lens. This adjusts film speed, lowers the shutter speed for special effects and decreases the depth-of-field. Reduces 1 f-stop.

Item #.....HOND2SMC( )

#### Neutral Density 4x

Same as above, but reduces 2 f-stops.

Item #.....HOND4SMC( )

*To order Sky, UV Protector and Polarizer Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.*

### PRICES FOR SUPER MULTI COATED FILTERS

FILTER SIZE:	52	55	58	62	67	72	77
Skylight 1B (SMC)	22.50	22.50	28.50	34.50	34.50	39.95	44.95
Ultraviolet (SMC)	22.50	22.50	28.50	34.50	34.50	39.95	44.95
Ultra Thin Circular Polarizer (SMC)	54.95	54.95	59.95	74.95	74.95	109.95	139.95
ND 2X (SMC)	22.50	22.50	28.50	30.00	31.50	31.50	31.50
ND 4X (SMC)	22.50	22.50	28.50	28.50	28.50	28.50	28.50

### Special Effects (Intensifier) Filters

#### Intensifier

The Intensifier will increase (enhance) the saturation of colors in the red end of the spectrum (red and orange) while leaving colors at the blue-green end of the spectrum nearly unaffected. This makes it perfect for autumn foliage, or photographing brightly colored flowers. This filter is similar to the Tiffen Enhancing Filter or other manufacturers didymium filters.

Item #.....HOE( )



Taken without a filter



Shown with Intensifier effect

*To order Intensifier Filters, just insert filter diameter (FILTER SIZE in chart below) after the item number of filter desired.*

### PRICES FOR INTENSIFIER FILTERS

FILTER SIZE:	49	52	55	58	62	67	72	77
Intensifier (Enhancing)	32.95	32.95	32.95	41.95	53.95	53.95	59.95	71.95

We are on the web at: <http://www.bhphotovideo.com>

## POLARIZER FILTERS

Just as a painter's palette provides the artist with a variety of colors to create beautiful works of art, filters offer the novice picture-taker and seasoned professional a host of basic tools that add strokes of color and contrast to produce better photographs.

As you learn the basics of how and why these filters work to enhance your images, you will soon be amazed at the photographic artistry filters put within your reach. Filters are easy to use - just attach them to the front of your lens. It is as simple as that.

**To order Tiffen filters, just insert filter diameter (FILTER SIZE in charts below) after the item number of filter desired.**

STANDARD SIZES			
SIZE	CODE	SIZE	CODE
37mm	37	67mm	67
40.5mm	40.5	72mm	72
43mm	43	77mm	77
46mm	46	82mm	82
49mm	49	for Cokin P	CP
52mm	52	for Cokin P-XL	PXL
55mm	55	3x3" for Lindahl	33L
58mm	58	4x4" for Lee/Calumet	44L
Bay 60 Hass	B60	4x5.65" for Lee	45L
62mm	62	<i>Subject to change without notice</i>	

SPECIAL SIZES			
SIZE	CODE	SIZE	CODE
Series 9	S9	4 x 4" Square	44
86mm Medium	86M	4 1/2" Round	4.5
86mm Coarse	86C	4 x 5.65" (3mm thick)	45P
95mm	95	4x5"	45
105mm	105	5x5" Square	55Q
138mm	138	5x6"	56
2 x 2" Square	22	6 x 6" Square	66
3 x 3" Square	33	6.6 x 6.6" Square	6.6
3x4"	34	<i>Subject to change without notice</i>	

GLASS FILTERS

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### Polarizer Filters

Polarizers let you deepen and intensify blue skies, achieve vibrant color saturation, reduce or eliminate glare and reflections from non-metallic objects and glass surfaces, and minimize haze in both color and black-and-white photography. They can be rotated to determine the amount of reflection to be removed. Rotate the polarizer to change blue sky densities from light to dark blue. Create dramatic contrast between blue skies and white clouds.

Standard linear polarizers are used with many cameras, while the cir-

cular polarizer is used on cameras with beam splitting metering systems commonly found on automatic SLR and autofocus cameras. Check your camera manual for the metering system employed. A circular polarizer can be effectively used with all cameras.

You can, in all cases, see the effect through the filter. If you are not using an automatic camera or have your camera on manual setting, both filters require that you open the lens from 1 1/2 to 2 f-stops.

You can combine them with other filters to maximize special effects.

#### Linear Polarizer Filter

Round filters are built with a rotating mount. Square, rectangular and drop-in are rotated in its holder. (See Lindahl, etc.)

Item #.....TIP( )

#### Circular Polarizer Filter

Same as the Linear Polarizer Filter, but for autofocus and beam splitting metering system cameras. Can be used effectively with all cameras.

Item #.....TICP( )

#### Warm Polarizer (Linear)

Same as standard Polarizer Filter, plus it deepens blue skies, saturates colors and reduces or eliminates glare from water or window surfaces. The warmer color is added to give you the benefit of maximum color enhancement of all colors, especially outdoors when used to photograph people.

Item #.....TIWP( )

**To order Tiffen Polarizer filters, just insert filter diameter (FILTER SIZE in charts below) after the item number.**

### PRICES FOR STANDARD SIZES OF POLARIZER FILTERS

FILTER SIZES:	37	40.5	46	49	52	55	58	B60	62	67	72	77	82	CP	33L	44L
Pol (Linear)	-	-	17.50	17.50	17.50	17.50	20.50	58.75	26.00	26.00	40.50	40.50	53.50	78.25	98.00	112.50
Circ Polarizer	34.95	34.95	34.95	34.95	34.95	34.95	36.95	-	50.50	50.50	67.50	67.50	99.95	-	-	-
Warm Pol (Lin)	-	-	29.75	29.75	29.75	29.75	36.95	83.25	45.50	45.50	59.75	59.75	86.25	72.00	98.00	112.50

### PRICES FOR SPECIAL SIZES OF POLARIZER FILTERS

FILTER SIZES:	DIS9	S9	86	SI95	95	SI105	105	DI138	138	22	33	34	44	4.5	4.5	45P	45	55Q	56	66	6.6
Pol (Linear)	95.50	109.95	118.50	189.95	360.00	184.95	360.00	259.95	279.95	100.00	100.00	136.95	137.00	186.00	194.95	276.95	254.95	284.95	284.95	284.95	284.95
Warm Polarizer	114.95	95.50	127.75	184.95	360.00	184.95	360.00	259.95	279.95	100.00	100.00	136.95	137.00	186.00	194.95	276.95	284.95	284.95	284.95	284.95	284.95

♦ = Rotating      ♣ = Screw-In Non-Rotating      ♣ = Drop-In Non-Rotating



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# TIFFEN

## SKY AND U.V. FILTERS

GLASS FILTERS

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### Protective and Ultraviolet (UV) Filters

Sky and Haze filters protect your front lens from dust, moisture, and scratches and can be left on at all times. They provide correction for Ultraviolet light which can register on film and videotape as a bluish cast and obscure distant details. Ultraviolet filters allow you to correct

for the UV effect to varying degrees. You must distinguish between atmosphere UV-haze and haze created by smog and pollution. Smog and pollution are comprised of opaque particles that absorb light as well as UV light and will not be appreciably affected by a UV filter.

#### UV Protector

Provides lens protection against scratches, dust, dirt, moisture and fingerprints, while reducing unwanted ultra-violet light.

Item #.....TIUVP( )

#### Sky 1-A

A general-use filter that absorbs a significant amount of UV light to ensure sharper detail and is slightly tinted for better colors. It is useful when shooting in outdoor open shade and on overcast days.

Item #.....TISL( )

#### Haze-1

Helpful when photographing mountain and marine scenes, where increased haze threatens to make your photographs indistinct in color and clarity. This filter absorbs greater UV light than a Sky 1-A.

Item #.....TIUV( )

#### UV15

Haze filter for 3200°K film with photofloods.

Item #.....TIUV15( )

#### UV16

Reduces excessive blue in electronic flash. Can also be used for haze correction.

Item #.....TIUV16( )

#### UV17

Greater haze correction, reduces blue in shade.

Item #.....TIUV17( )

#### Haze 2A

For shooting at high altitudes, where UV light is prevalent and greater absorption necessary.

Item #.....TIUV2A( )



### SPECIFICATIONS

FILTER:	UV LIGHT ABSORPTION:
UV Protector	22%
Sky 1-A	45.5%
Haze 1	71%
UV 15	81%
UV 16	86.5%
UV 17	97%
Haze 2A	Virtually all UV light

**Note:** UV light absorption figures shown are measured at 400 nanometers (the boundary point between visible and UV light) - an industry reference standard. All technical information is subject to manufacturing tolerances and subject to change without notice. This data is provided for point of reference only.

To order Tiffen Protective and Ultraviolet filters, just insert filter diameter (FILTER SIZE in charts below) after the item number.

### PRICES FOR STANDARD SIZES OF PROTECTIVE AND ULTRAVIOLET (UV) FILTERS

FILTER SIZES:	37	40.5	43	46	49	52	55	58	B60	62	67	72	77	82
UV Protector	8.75	8.75	8.75	8.75	8.75	8.75	8.75	11.00	30.50	14.00	14.00	25.50	25.50	39.50
Sky 1A	10.50	10.50	10.50	10.50	10.50	10.50	10.50	12.95	49.00	16.50	16.50	29.50	29.50	39.50
Haze 1	10.50	10.50	8.95	10.50	10.50	10.50	10.50	12.95	49.00	16.50	16.50	29.50	29.50	39.50
UV 17	-	-	-	-	16.50	16.50	16.50	18.75	68.00	26.50	26.50	46.50	46.50	64.00
Haze 2A	-	57.50	-	-	16.50	16.50	16.50	18.75	68.00	26.50	26.50	46.50	46.50	64.00

### PRICES FOR SPECIAL SIZES OF PROTECTIVE AND ULTRAVIOLET (UV) FILTERS

FILTER SIZES:	S9	86	95	105	138	22	33	34	44	4.5	45P	45	55Q	56	66	6.6
Sky 1A	47.25	67.95	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.75	239.95	239.95	239.95	239.95	239.95
Haze 1	47.25	67.95	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.75	239.95	239.95	239.95	239.95	239.95
UV 15	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.75	239.95	239.95	239.95	239.95	239.95
UV 16	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.75	239.95	239.95	239.95	239.95	239.95
UV 17	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.75	239.95	239.95	239.95	239.95	239.95
Haze 2A	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.75	239.95	239.95	239.95	239.95	239.95

Members of PPA, ASMP, PSA, NPPA and NANPA

## F I L T E R S F O R B L A C K A N D W H I T E

### Filters for Black and White Film

Color filters for black-and-white film perform a variety of filtration effects, including contrast control, enhanced skintones, tonal correction and more dramatic landscapes. To understand how these filters work, keep in mind that filters allow light of their own color to pass through while filtering out complementary colors - thus lightening objects of their own color and darkening those of the complementary color.

**Red**.....absorbs blue and green    **Yellow** .....absorbs blue    **Magenta**.....absorbs green  
**Green** .....absorbs blue and red    **Cyan**.....absorbs red    **Blue**.....absorbs red and green

Black and white film records tonal differences between colored objects as black, white and shades of gray. Since black and white film can be more sensitive to blue light than to other colors, blue appears lighter on film than to the human eye. That is why a photo of a sky often washes out to the point where any contrast between sky and clouds disappears. Some filters absorb light, so for proper exposure additional light exposures are given for each filter. Exposure compensation requirements are listed in f-stops. Most SLR and automatic cameras meter through the filter and will make the filter exposure compensation automatically. Manual f-stop compensation is required only when making manual adjustments using a hand-held or external light metering system.

### SPECIFICATIONS OF FILTERS FOR BLACK AND WHITE FILM

FOR MANUAL ADJUSTMENT INCREASE F-STOP			FOR MANUAL ADJUSTMENT INCREASE F-STOP			FOR MANUAL ADJUSTMENT INCREASE F-STOP		
FILTER	Daylight	Tungsten	FILTER	Daylight	Tungsten	FILTER	Daylight	Tungsten
#6 Yellow	½	½	#21 Orange	2½	2	#61 Dark Green	3½	3½
#8 Yellow	1	½	#11 Green	2	1½	#23A Light Red	2½	1½
#9 Yellow	1	½	#13 Green	2½	2	#25 Red	3	2½
#12 Yellow	1	½	#56 Light Green	2½	2½	#29 Dark Red	4½	2
#15 Deep Yellow	1½	1	#58 Dark Green	3	3	#47 Dark Blue	2½	3
#16 Orange	1½	1				#47B Dark Blue	3	4

*Most of these filters will have different exposure compensations for daylight, as they will for tungsten film. Daylight is natural outdoor light. Tungsten light comes from incandescent bulbs.*

#### #6 Yellow Filter

Darkens sky slightly and adds subtle definition to the clouds.

**Item #** .....TI6( )

#### #8 Yellow 2 Filter

Offers the most natural tonal correction possible for contrast in clouds against blue skies, as well as flowers and foliage. Great for landscapes.

**Item #** .....TI8( )

#### #9 Yellow Filter

Offers stronger cloud contrast for landscapes than #8 filter.

**Item #** .....TI9( )

#### #12 Yellow Filter

Great for aerial shots when you need to cut bluish haze.

**Item #** .....TI12( )

#### #15 Deep Yellow Filter

Captures dark, dramatic skies in landscapes, marine scenes and aerial photography with more dramatic effect than an #8 or #9 filter. Similar to orange color in other brands.

**Item #** .....TI15( )

#### #16 Orange Filter

Creates cloud/sky contrast that exceeds that of #15 Deep Yellow.

**Item #** .....TI16( )

#### #21 Orange Filter

Useful when shooting seascapes and to punch up contrast, rendering blue tones darker.

**Item #** .....TI21( )

#### #11 Green 1 Filter

Outdoor filter for pleasing flesh tones. Suited for portraits photographed against the sky. Maintains tonal ranges while greens are lightened.

**Item #** .....TI11( )

#### #13 Green Filter

For indoor photographs under tungsten lighting, especially male portraits. Renders flesh tones deep, swarthy and appealing.

**Item #** .....TI13( )

#### #56 Light Green Filter

Ideal when you want to capture good flesh tones while darkening blue skies.

**Item #** .....TI56( )

#### #58 Dark Green Filter

Lightens dark foliage considerably. Helps to achieve high contrast effects in photo-microscopy.

**Item #** .....TI58( )

#### #61 Dark Green Filter

The best filter when you want to lighten green foliage to a maximum degree.

**Item #** .....TI61( )

#### #23A Light Red Filter

Generally helpful when shooting objects (not people) and need to emphasize contrast. Ideal for architecture photography.

**Item #** .....TI23A( )

#### #25 Red 1 Filter

Creates dramatic sky effects, emphasizing cloud contrast for landscapes. Can simulate a moonlit scene at midday (with slight underexposure). Yields extreme contrast in skies, turns foliage white and cuts through fog and haze with infrared film.

**Item #** .....TI25( )

#### #29 Dark Red Filter

Fields extreme and spectacular sky effects and cloud contrast, causing dramatic tonal effects.

**Item #** .....TI29( )

#### #47 Dark Blue Filter

Accentuates haze and fog, creating dense, moody atmospheric effects in landscape and marine scenes.

**Item #** .....TI47( )

#### #47B Filter

This filter lightens the same color for more vivid detail.

**Item #** .....TI47B( )

#### #87 Infrared Filter

For infrared film when you want to transmit only the infrared spectrum. No visible transmission. The f-stop increase is based on use and processing.

**Item #** .....TI87( )

#### #18A Filter

Infra-red and ultra-violet transmitting; visible absorbing.

**Item #** .....TI18A( )

# TIFFEN

## FILTERS FOR BLACK AND WHITE

GLASS FILTERS

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### Filters for Black and White Film, continued

*To order Tiffen filters, just insert filter diameter (FILTER SIZE in charts below) after the item number.*

#### PRICES FOR STANDARD SIZES OF FILTERS FOR BLACK AND WHITE FILM

FILTER SIZES:	40.5	46	49	52	55	58	B60	62	67	72	77	82	CP
#8 Yellow	10.25	10.25	10.25	10.25	10.25	12.00	56.00	15.75	15.75	28.00	28.00	42.00	60.00
#9 Yellow	-	-	16.50	16.50	16.50	-	-	26.50	26.50	46.50	-	64.00	-
#12 Yellow	57.50	-	16.50	16.50	16.50	18.75	68.00	26.50	26.50	46.50	46.50	64.00	-
#15 Deep Yellow	10.25	-	10.25	10.25	10.25	12.00	56.00	15.75	15.75	28.00	28.00	42.00	60.00
#16 Orange	57.50	-	16.50	16.50	16.50	18.75	68.00	26.50	26.50	46.50	46.50	64.00	-
#21 Orange	-	-	16.50	16.50	16.50	18.75	68.00	26.50	26.50	46.50	46.50	64.00	-
#11 Green	10.25	10.25	10.25	10.25	10.25	12.00	56.00	15.75	15.75	28.00	28.00	42.00	60.00
#58 Dark Green	57.50	16.50	16.50	16.50	16.50	18.75	68.00	26.50	26.50	46.50	46.50	64.00	-
#23A Light Red	57.50	16.50	16.50	16.50	16.50	18.75	68.00	26.50	26.50	46.50	46.50	-	-
#25 Red	10.25	10.25	10.25	10.25	10.25	12.00	56.00	15.75	15.75	28.00	28.00	42.00	60.00
#29 Dark Red	57.50	-	16.50	16.50	16.50	18.75	68.00	26.50	26.50	46.50	46.50	64.00	-
#47 Dark Blue	-	-	16.50	16.50	16.50	18.75	68.00	26.50	26.50	46.50	46.50	64.00	-
#47B Dark Blue	-	-	16.50	16.50	16.50	18.75	68.00	26.50	26.50	46.50	46.50	64.00	-
#87 Infrared	-	-	92.50	92.50	92.50	92.50	-	114.95	114.95	138.50	138.50	152.50	-
#18A	-	-	92.50	92.50	92.50	92.50	-	114.95	114.95	138.50	138.50	152.50	-

#### PRICES FOR SPECIAL SIZES OF FILTERS FOR BLACK AND WHITE FILM

FILTER SIZES:	S9	86	95	105	138	22	33	34	44	4.5	45P	45	55Q	56	66	6.6
#6 Yellow	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#8 Yellow	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#9 Yellow	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#12 Yellow	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#15 Deep Yellow	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#16 Orange	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#21 Orange	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#11 Green	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#13 Green	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#56 Lt Green	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#58 Dark Green	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#61 Dark Green	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	182.95	239.95	239.95
#23A Lt Red	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#25 Red	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#29 Dark Red	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#47 Dark Blue	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
#47B Dark Blue	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95

**Used Equipment Bought, Sold and Traded**



For the majority of situations, there are two types of color film used; film for taking pictures outdoors (daylight corrected film) and film for use indoors with incandescent lighting (tungsten corrected film). If daylight film is used indoors without a flash, your images will have an unwanted red-yellow cast, and if your tungsten film is used outdoors, your photos will appear with a blue cast to them. Filters provide a simple solution for producing natural colors. If you need the most accurate color rendition in your scene, you should use a color temperature meter to measure the color temperature of any light source. Color

temperature is measured in degrees Kelvin (K). Kelvin degrees inform us as to what the balance of cool and warm wavelengths is that makes up the light we are considering. Sunlight, for example, has a color temperature of @ 5500°K as compared to tungsten lamps which are in the 3200-3400°K range. Understanding what this all means becomes easier when you notice that the higher the Kelvin degrees, the bluer the light and as the Kelvin degrees drop, the light becomes warmer. For best results, use the filter that most accurately matches your film type to the available light you are shooting in.

### Color Conversion Filters



#### 80 Series (Cool Filters)

Use this series of filters when you have daylight corrected film (most commonly used) in your camera and you want to shoot indoors without a flash.

##### 80A Filter

Balances daylight film for studio lighting and copy stand lighting. (3200°K)

Item #.....TI80A( )

##### 80B Filter

Balances daylight film for photo flood-lamps. (3400°K)

Item #.....TI80B( )

##### 80C Filter

Balances daylight film for strobe light. A bit cooler than the 80B Filter.

Item #.....TI80C( )

#### 81 Series (Warm Filters)

These filters are useful when shooting with daylight corrected film outside on an overcast day, in open shade under trees, or with an electronic flash in situations that emphasize cooler tones. The 81 series will add warmth to the scene to achieve better color. In this series, as the letters advance, intensity increases and warmer results are achieved.

##### 81 Filter

Balances daylight film for electronic flash.

Item #.....TI81( )

##### 81A Filter

Balances daylight film for use with electronic flash. Same as 81, but a bit warmer.

Item #.....TI81A( )

##### 812 Filter

Improves skin tone and is ideal for portraits taken on a cloudy day or under trees. It absorbs the blue cast often caused by electronic flash and adds warmth to pale, washed-out skin tones. Can be used in place of a Sky 1-A for warmer results.

Item #.....TI812( )

##### 81B Filter

Balances Type B film for use with 3400°K lamps.

Item #.....TI81B( )

##### 81C Filter

Balances Type A or Type B film with clear flash.

Item #.....TI81C( )

##### 81D Filter

Will render warmer results than 81C filter. For warmth of a sunset.

Item #.....TI81D( )

##### 81EF Filter

Balances Type A film (3400°K), producing warmest results. Recommended for sunsets.

Item #.....TI81EF( )

#### 82 Series (Cool Filters)

The 82 Series filters help reduce unnatural red tones when filming in the early morning or late afternoon light. In this series, as the letters advance, intensity increases and cooler results are achieved.

##### 82 Filter

For any 100% increase in Kelvin temperature.

Item #.....TI82( )

##### 82A Filter

Balances Type A film for use with 3200°K lamps.

Item #.....TI82A( )

##### 82B Filter

Balances Type B film for use with 3200°K lamps.

Item #.....TI82B( )

##### 82C Filter

Balances Type A film for use with 3200°K lamps.

Item #.....TI82C( )

#### 85 Series (Warm Filters)

The 85 Series (Warm Filters) is a must for shooting tungsten corrected film outdoors. These filters will produce natural colors in your pictures.



##### 85 Filter

Converts Type A film to daylight.

Item #.....TI85( )

##### 85B Filter

Converts Type B film to daylight.

Item #.....TI85B( )

##### 85C Filter

Produces warmer results with daylight film, cooler results with tungsten film.

Item #.....TI85C( )

To order Tiffen filters, just insert filter diameter (FILTER SIZE in on next page) after the item number.

# TIFFEN

## FILTERS FOR COLOR

GLASS FILTERS

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### Color Conversion Filters, continued

PRICES FOR STANDARD SIZES OF COLOR CONVERSION FILTERS															
FILTER SIZES:	37	40.5	43	46	49	52	55	58	B60	62	67	72	77	82	CP
80A	-	10.95	-	10.95	10.95	10.95	10.95	12.00	56.00	15.75	15.75	27.25	27.25	42.00	60.00
80B	-	10.95	-	10.95	10.95	10.95	10.95	12.00	56.00	15.75	15.75	27.25	27.25	42.00	60.00
81A	-	10.95	-	10.95	10.95	10.95	10.95	12.00	56.00	15.75	15.75	27.25	27.25	42.00	60.00
812	-	10.95	9.95	10.95	10.95	10.95	10.95	12.00	56.00	15.75	15.75	27.25	27.25	42.00	60.00
81B	-	10.95	-	10.95	10.95	10.95	10.95	12.00	56.00	15.75	15.75	27.25	27.25	42.00	60.00
81C	-	-	-	-	16.75	16.75	16.75	18.95	68.00	26.50	26.50	46.25	46.25	64.00	60.00
81EF	-	-	-	-	16.75	16.75	16.75	18.95	68.00	26.50	26.50	46.25	46.25	64.00	60.00
82	-	57.50	-	16.75	16.75	16.75	16.75	18.95	68.00	26.50	26.50	46.25	46.25	64.00	60.00
82A	-	57.50	-	-	16.75	16.75	16.75	18.95	68.00	26.50	26.50	46.25	46.25	64.00	-
82B	-	57.50	-	-	16.75	16.75	16.75	18.95	68.00	26.50	26.50	46.25	46.25	64.00	-
85	-	57.50	-	-	16.75	16.75	16.75	18.95	68.00	26.50	26.50	46.25	46.25	64.00	-
85B	-	57.50	-	-	16.75	16.75	16.75	18.95	68.00	26.50	26.50	46.25	46.25	64.00	60.00
85C	-	57.50	-	-	16.75	16.75	16.75	18.95	68.00	26.50	26.50	46.25	46.25	64.00	60.00

PRICES FOR SPECIAL SIZES OF COLOR CONVERSION FILTERS																
FILTER SIZES:	S9	86	95	105	138	22	33	34	44	4.5	45P	45	55Q	56	66	6.6
80A	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
80B	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
80C	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
81	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
81A	47.25	69.95	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
812	47.25	59.95	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
81B	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
81C	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
81D	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
81EF	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
82	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
82A	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
82B	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
82C	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
85	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
85B	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95
85C	47.25	68.00	146.00	146.00	209.95	81.00	81.00	109.95	111.00	139.95	166.95	239.95	239.95	239.95	239.95	239.95

**Literature Available Upon Request**

### COLOR CONVERSION FILTER SPECIFICATIONS

FILTER	MANUAL ADJUSTMENT INCREASE F-STOP	FILTER	MANUAL ADJUSTMENT INCREASE F-STOP	FILTER	MANUAL ADJUSTMENT INCREASE F-STOP	FILTER	MANUAL ADJUSTMENT INCREASE F-STOP
80A	2	812	1/8	81EF	1/8	82C	1/8
80B	1 7/8	81B	1/8	82	1/8	85	1/8
80C	1	81C	1/8	82A	1/8	85B	1/8
81	1/8	81D	3/8	82B	3/8	85C	1/8
81A	2 1/8						

### Color Compensating Filters

Color Compensating filters are used to compensate for deficiencies in the color quality of light sources, deficiencies in film, reciprocity failure, etc. They come in different densities in 6 colors. With these filters you can remove unwanted color or experiment with color renditions to bring out the most desirable colors in a scene. They can be combined to produce just the tint and density necessary for a particular shot.

The Color Compensating filters are available in blue, cyan, green, magenta, red and yellow.

The CC30R filter is a red filter, recommended specifically for underwater photography with daylight film. Use it when you want to enhance warmer colors and to produce accurate color when shooting through water or tinted glass. F-stop increase 1/8 stop.

CC10B Blue Filter  
Item #.....TICC10B( )

CC20B Blue Filter  
Item #.....TICC20B( )

CC05C Cyan Filter  
Item #.....TICC05C( )

CC05G Green Filter  
Item #.....TICC05G( )

CC10G Green Filter  
Item #.....TICC10G( )

CC20G Green Filter  
Item #.....TICC20G( )

CC05M Magenta Filter  
Item #.....TICC05M( )

CC10M Magenta Filter  
Item #.....TICC10M( )

CC20M Magenta Filter  
Item #.....TICC20M( )

CC30M Magenta Filter  
Item #.....TICC30M( )



CC40M Magenta Filter  
Item #.....TICC40M( )

CC50M Magenta Filter  
Item #.....TICC50M( )

CC70M Magenta Filter  
Item #.....TICC70M( )

CC05R Red Filter  
Item #.....TICC05R( )

CC10R Red Filter  
Item #.....TICC10R( )

CC20R Red Filter  
Item #.....TICC20R( )

CC30R Red Filter  
Item #.....TICC30R( )

CC40R Red Filter  
Item #.....TICC40R( )

CC70R Red Filter  
Item #.....TICC70R( )

CC05Y Yellow Filter  
Item #.....TICC05Y( )

CC10Y Yellow Filter  
Item #.....TICC10Y( )

CC20Y Yellow Filter  
Item #.....TICC20Y( )

CC30Y Yellow Filter  
Item #.....TICC30Y( )

CC40Y Yellow Filter  
Item #.....TICC40Y( )

CC50Y Yellow Filter  
Item #.....TICC50Y( )

CC70Y Yellow Filter  
Item #.....TICC70Y( )

**To order Tiffen Compensating filters, just insert filter diameter (FILTER SIZE in charts below and on next page) after the item number.**

### PRICES FOR STANDARD SIZES OF COLOR COMPENSATING FILTERS

FILTER SIZE:	49	52	55	58	B60	62	67	72	77	86	CP
CC10M,20M	34.95	34.95	34.95	47.95	87.95	61.95	61.95	89.50	89.50	74.75	-
CC30M	-	34.95	34.95	47.95	87.95	61.95	61.95	89.50	89.50	74.75	60.00
CC40M	34.95	34.95	34.95	47.95	87.95	61.95	61.95	89.50	89.50	74.75	-

Some standard size Color Compensating Filters have a limited availability. Please confirm availability prior to ordering.

# TIFFEN

## FILTERS FOR COLOR

### Color Compensating Filters, continued

#### PRICES FOR SPECIAL SIZES OF COLOR COMPENSATING FILTERS

FILTER SIZE:	S9	22	33	34	44	45P	6.6
CC10-20B	100.00	100.00	100.00	136.95	137.00	296.95	284.95
CC05C	100.00	100.00	100.00	136.95	137.00	296.95	284.95
CC05-10-20G	100.00	100.00	100.00	136.95	137.00	296.95	284.95
CC05-10-20-30-40M	100.00	100.00	100.00	136.95	137.00	296.95	284.95
CC50-70M	100.00	100.00	100.00	136.95	137.00	296.95	284.95
CC05-10-20-30-40R	100.00	-	100.00	136.95	137.00	296.95	284.95
CC05-10Y	100.00	100.00	100.00	136.95	137.00	296.95	284.95
CC20Y	100.00	100.00	100.00	136.95	137.00	296.95	284.95
CC30-40Y	100.00	100.00	100.00	136.95	137.00	296.95	284.95
CC50-70Y	100.00	100.00	100.00	136.95	137.00	296.95	284.95

### Fluorescent Light Correction Filters

Tiffen's FL-D and FL-B fluorescent light correction filters provide the perfect solution for obtaining pleasing skin tones and correct color while shooting without a flash under fluorescent lighting. The FL-D and FL-B filters give true-to-life color rendition by removing the harsh blue-green cast ordinarily resulting from filming under fluorescent bulbs. Use the FL-D with daylight film and the FL-B with tungsten film. Both filters work just as well with video, improving the camera's electronic white balance capability. For superior and dramatic color saturation of sunrises, sunsets and other creative applications not involving fluorescent lighting, use the FL-D and FL-B filters for breathtaking results.

#### SPECIFICATIONS

FILTER	MANUAL ADJUSTMENT INCREASE F-STOP	FILTER	MANUAL ADJUSTMENT INCREASE F-STOP
FL-D	1	FL-B	1

FL-D Filter for Daylight Film

Item #.....TIFLD( )

FL-B Filter for Tungsten Film

Item #.....TIFLB( )

**To order Tiffen filters, just insert filter diameter (FILTER SIZE in charts below) after the item number.**

#### PRICES FOR TIFFEN FLUORESCENT LIGHT CORRECTION FILTERS

FILTER SIZES:	37	40.5	43	46	49	52	55	58	B60
Fluorescent FL-D	14.50	14.50	14.50	14.50	14.50	14.50	14.50	18.75	56.00
Fluorescent FL-B	-	14.50	-	-	14.50	14.50	14.50	18.75	-

FILTER SIZES:	62	67	72	77	82	CP	86	S9	95
Fluorescent FL-D	23.50	23.50	37.00	37.00	66.95	60.00	90.00	100.00	186.00
Fluorescent FL-B	23.50	23.50	37.00	37.00	66.95	-	90.00	100.00	186.00

FILTER SIZES:	105	138	22	33	34	44	4.5	45P	6.6
Fluorescent FL-D	186.00	219.95	100.00	100.00	139.95	141.00	139.95	244.95	284.95
Fluorescent FL-B	186.00	219.95	100.00	100.00	139.95	141.00	139.95	244.95	284.95

We are on the web at: <http://www.bhphotovideo.com>

## NEUTRAL DENSITY FILTERS

### N.D. Filters for Black & White and Color

#### Neutral Density Filter

Used to reduce the amount of light reaching the film with no selective absorption effects on colors. Available in several densities. Can be combined to provide the right density necessary for a particular shot. (To order - ND Should be followed by its density code).

Item # .....TIND( )

SPECIFICATIONS								
DENSITY	CODE	REDUCTION	DENSITY	CODE	REDUCTION	DENSITY	CODE	REDUCTION
ND .1	.1	1/8 f-stop	ND .6	.6	2 f-stops	ND .9	.9	3 f-stops
ND .2	.2	1/4 f-stop	ND .7	.7	2 1/2 f-stops	ND 1.0	1.0	3 1/2 f-stops
ND .3	.3	1 f-stop	ND .8	.8	2 3/4 f-stops	ND 1.2	1.2	4 f-stops
ND .5	.5	1 1/2 f-stop				ND 1.5	1.5	5 f-stops

### PRICES FOR NEUTRAL DENSITY FILTERS

FILTER SIZES:	40.5	43	46	49	52	55	58	B60	62	67	72	77	82	CP
ND .3, .6, .9	10.25	*9.75	10.25	10.25	10.25	10.25	12.00	56.00	15.75	15.75	28.00	28.00	42.00	60.00

\*.6 Only

FILTER SIZES:	S9	86	95	105	138	22	33	34	44	4.5	45P	45	55Q	56	66	6.6
ND .3, .6, .9	88.95	68.00	146.00	146.00	209.95	79.95	79.95	109.95	109.95	139.95	166.95	239.95	239.95	239.95	239.95	239.95
ND .1, .2, .4, .5, .7, .8, 1.0	88.95	79.95	146.00	146.00	209.95	79.95	79.95	109.95	109.95	139.95	166.95	239.95	239.95	239.95	239.95	239.95
ND 1.2, 1.5	106.95	86.95	-	-	244.95	96.95	96.95	138.95	138.95	172.95	199.95	269.95	269.95	269.95	269.95	269.95

## SPECIAL EFFECTS FILTERS

### Color Grad Filters

Half color, half clear filters with a smooth transition. Used to introduce color to a select part of a scene. They selectively tone down bright areas, add color excitement to a drab sky, change the specific color in a scene to create a special effect, enhance an existing color, or create subtle color drama. They create more balanced exposure in uneven lighting situation. Made from ground and polished glass

that feature superior optical properties, they are more scratch resistant than plastic, helping to ensure that the effect will not wash or rub off. The Academy Award-winning lamination process offers better resolution quality. They include a Cordura storage pouch and are made in the U.S.A. (When ordering, please include density number after the color code.)

Blue 1-5 Item #...TIGBL( )	Cranberry 1-3 Item #...TIGCR( )	Magenta 1-5 Item #....TIGM( )	Plum 1-3 Item #...TIGPL( )	Sunrise 1-3 Item #...TIGSR( )	Tropic Blue 1-3 Item #...TIGTB( )
Chocolate 1-3 Item #..TIGCH( )	Cyan 1-5 Item #..TIGC( )Q	Neutral Density (ND) 0.3, 0.6, 0.9, 1.2 Item #..TIGND( )	Red 1-5 Item #....TIGR( )	Sunset 1-3 Item #....TIGSS( )	Twilight 1-3 Item #...TIGTL( )
Cool Blue 1-5 Item #...TIGCB( )	Grape 1-3 Item #...TIGGP( )		Skyfire 1-3 Item #....TIGSF( )	Tangerine 1-3 Item #....TIGT( )	Yellow 1-5 Item #.....TIGY( )
Coral 1/8, 1/4, 1/2, 1-5 Item #.....TIGC( )	Green 1-5 Item #..TIGGR( )	Pink 1-5 Item #.....TIGP( )	Straw 1-3 Item #...TIGST( )	Tobacco 1-3 Item #..TIGTO( )	

Unless specified, all Color Grads will be supplied as a *soft edge*. Depending on the size of the filter, the transition area on a 4x5" filter is between 1/2" to 2" wide before reaching full density. Transition area on a *hard edge* 4x5" filter is between 1/4" to 1/2" wide before reaching full density. Transition area on an attenuator filter takes place throughout the whole filter, starting clear and reaching its maximum density at the opposite end.

# TIFFEN

## SPECIAL EFFECTS FILTERS

GLASS FILTERS

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### Color Grad Filters, continued

*To order Tiffen filters, just insert filter diameter (FILTER SIZE in charts below) after the item number.*

#### PRICES FOR COLOR GRAD FILTERS

FILTER SIZE:	46	49	52	55	58	B60	62	67	72	77	CP	PXL	45L
Color Grad Blue 3	31.50	31.50	31.50	31.50	36.75	—	44.75	44.75	58.95	58.95	78.50	122.50	169.95
Color Grad Blue 1	—	—	—	—	—	—	—	—	—	—	—	—	169.95
Color Grad Grape 1-3	—	—	—	—	—	—	—	—	—	—	78.50	122.50	69.95
Color Grad ND 0.6	31.50	31.50	31.50	31.50	36.75	87.50	44.75	44.75	58.95	58.95	78.50	122.50	169.95
Color Grad ND 0.3,0.9	—	—	—	—	—	—	—	—	—	—	78.50	122.50	169.95
Color Grad Plum 1-3	—	—	—	—	—	—	—	—	—	—	78.50	122.50	169.95
Color Grad Straw 1-3	—	—	—	—	—	—	—	—	—	—	78.50	122.50	169.95
Color Grad Sunrise 1-3	—	*31.50	*31.50	*31.50	*36.75	—	*44.75	*44.75	*58.95	*58.95	—	122.50	169.95
Color Grad Sunset 1-3	—	—	—	—	—	—	—	—	—	—	78.50	122.50	169.95
Color Grad Tangerine 1-3	—	—	—	—	—	—	—	—	—	—	78.50	122.50	169.95
Color Grad Tobacco 1-3	—	—	—	—	—	—	—	—	—	—	78.50	122.50	169.95
Color Grad Tropic Blue 1-3	—	—	—	—	—	—	—	—	—	—	78.50	122.50	169.95

*\*Available only in Density #3*

FILTER SIZE:	86	34	44	45	45P	55Q	56	66	6.6
Color Grad Blue 1-5	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Choc 1, 2, 3	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Cool Blue 1-5	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Coral 1/8, 1/4, 1/2, 3/4, 5	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Cranberry 1, 2, 3	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Cyan 1-5	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Grape 1, 2, 3	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Green 1-5	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Magenta 1-5	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad ND 0.3, 0.6, 0.9	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad ND 1.2	-	213.95	213.95	368.95	324.95	-	-	-	436.95
Color Grad Pink 1-5	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Plum 1, 2, 3	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Red 1-5	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Straw 1,2,3	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Skyfire 1, 2, 3	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Sunset 1, 2, 3	159.95	173.95	173.95	368.95	324.95	368.95	368.95	368.95	368.95
Color Grad Tangerine 1, 2, 3	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Tobacco 1, 2, 3	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Tropic Blue 1, 2, 3	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Twilight 1, 2, 3	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95
Color Grad Yellow 1-5	159.95	173.95	173.95	368.95	276.95	368.95	368.95	368.95	368.95

*Rectangular Color Grads will be supplied 'vertical'. They are also available 'horizontal' for special applications.*

**Overnight Shipping Available**

## SPECIAL EFFECTS FILTERS

### Star Filters

Tiffen Star filters are one of the most creative and easy-to-use accessories you can own to add dazzling effects to your photography and videography.

Bright star line effects, which generate excitement and can enhance mood and glamour in a wide range of images, are created from either original light sources or bright reflections.

Sometimes a suitable source will not be obvious. If you look, you will find them in a variety of places. Star filters are frequently used to add sparkle to a water scene, candle flames, stadium spotlights at sporting and entertainment events, product photography of jewelry and crystal, street lamp scenes, sequined clothing, reflections off automobiles and contemporary architecture, and many other situations. Your ability to add interest to your images with star filters can be enhanced by a knowledge of how they work.

Star filters are made with precision-etched lines on clear optical glass. There are sets of parallel lines, each running in separate directions and spaced either 2, 3 or 4 millimeters apart, that determine the star's intensity and number of points.

Using a 4pt 2mm star filter produces very bright star points, because the lines are spaced only 2mm apart. This star filter can lower contrast, as dark areas in the image will lighten due to the flare of the star effect. This is ideal for scenes where you want the star lines to dominate.

The most commonly used star effect is the 4pt 2mm star filter. The 4pt 3mm filter are spaced further apart, producing finer, narrower stars with less effect on contrast. Perfectly suited for adding an accent of sparkle to an image, as the star lines are finer, less intense.

The Vector Star, the Hyper Star, Hollywood Star and North Star are stars that have asymmetrical designs with lines of different brightness, for a more natural looking star. Star filters are also produced in 6pt, 8pt and 12pt configurations.

It is important to realize that the brighter and larger a light source, the more pronounced the star effect will be. No exposure compensation is recommended.



Star Effect 6pt 2mm



Star Effect 4pt 2mm

**To order Star filters, insert the filter diameter (FILTER SIZE in chart below) after the item number.**

Star Effect 4 Pt. 2mm  
**Item#**.....**TIS4P2**( )      Star Effect 6 Pt.  
**Item#**.....**TIS6P**( )      Star Effect 8 Pt.  
**Item#**.....**TIS8P**( )

Vector Star      Hyper Star      Hollywood Star      North Star  
**Item #**.....**TIVS**( )      **Item #**.....**TIHS**( )      **Item #**.....**TIHWS**( )      **Item #**.....**TINS**( )

### PRICES FOR STAR FILTERS

FILTER SIZES:	37	43	46	49	52	55	58	B60	62	67	72	77	82
Star Effect 4pt 2mm	20.25	20.25	20.95	20.95	20.95	20.95	24.50	136.00	37.50	37.50	63.50	63.50	-
Star Effect 6pt 2mm	-	-	-	26.75	26.75	26.75	31.25	164.00	43.25	43.25	72.95	72.95	149.50
Star Effect 8pt 2mm	-	-	29.50	29.50	29.50	29.50	34.50	99.00	47.50	47.50	75.95	75.95	149.50
Vector Star (Hollywood F/X)	-	-	-	55.75	55.75	55.75	64.75	126.00	90.00	90.00	117.00	117.00	141.00
Hyper Star (Hollywood F/X)	-	-	66.50	66.50	66.50	66.50	77.50	151.25	108.00	108.00	140.00	140.00	168.25
Hollywood Star (Hollywood F/X)	-	-	66.50	66.50	66.50	66.50	77.50	151.25	107.95	107.95	140.00	140.00	168.25
North Star (Hollywood F/X)	-	-	-	66.50	66.50	66.50	77.50	151.25	107.95	107.95	140.00	140.00	168.25

◆ = ROTATING ♣ = SCREW-IN NON-ROTATING ⬢ = DROP-IN NON-ROTATING

# TIFFEN

## SPECIAL EFFECTS FILTERS

GLASS FILTERS

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### Star Filters, continued

#### PRICES FOR ROTATING STAR FILTERS

FILTER SIZES:	S9	86	138	4.5
Star Effect 4pt 1mm, 2mm	179.95	187.95	286.95	244.95
Star Effect 4pt 3mm	179.95	187.95	286.95	244.95
Star Effect 4pt 4mm	179.95	187.95	286.95	244.95
Star Effect 6pt 2mm	179.95	187.95	286.95	244.95
Star Effect 6pt 3mm, 4mm	179.95	187.95	286.95	244.95
Vector Star (Hollywood F/X)	179.95	187.95	286.95	244.95
Hyper Star (Hollywood F/X)	204.95	209.95	337.95	269.95
Hollywood Star (Hollywood F/X)	204.95	209.95	337.95	269.95
North Star (Hollywood F/X)	179.95	187.95	286.95	244.95

#### PRICES FOR DROP-IN STAR FILTERS

FILTER SIZES:	DI S9	DI 138	22	33	34	44	DI 4.5	45P	6.6
Star Effect 4pt 1mm	169.95	256.95	154.95	154.95	169.95	169.95	179.95	249.95	348.95
Star Effect 4pt 2mm	169.95	256.95	154.95	154.95	169.95	169.95	179.95	249.95	348.95
Star Effect 4pt 3mm	169.95	256.95	154.95	154.95	169.95	169.95	179.95	249.95	348.95
Star Effect 4pt 4mm	169.95	256.95	154.95	154.95	169.95	169.95	179.95	249.95	348.95
Star Effect 6pt 2mm	169.95	256.95	154.95	154.95	169.95	169.95	179.95	249.95	348.95
Star Effect 6pt 3mm	169.95	256.95	154.95	154.95	169.95	169.95	179.95	249.95	348.95
Star Effect 6pt 4mm	169.95	256.95	154.95	154.95	169.95	169.95	179.95	249.95	348.95
Star Effect 8pt 3mm, 4mm	169.95	256.95	154.95	154.95	169.95	169.95	179.95	249.95	348.95
Star Effect 12pt 2mm, 3mm, 4mm	169.95	256.95	154.95	154.95	169.95	169.95	179.95	249.95	348.95
Vector Star (Hollywood F/X)	169.95	256.95	154.95	154.95	169.95	169.95	179.95	249.95	348.95
Hyper Star (Hollywood F/X)	194.95	307.95	170.00	170.00	196.95	196.95	219.95	277.95	409.95
Hollywood Star (Hollywood F/X)	194.95	307.95	170.00	170.00	196.95	196.95	219.95	277.95	409.95
North Star (Hollywood F/X)	169.95	256.95	154.95	154.95	169.95	169.95	179.95	249.95	348.95

Star Effect 4 Pt.

Item# .....TIS4P( )

Star Effect 6 Pt.

Item# .....TIS6P( )

**To order Star filters, insert the filter diameter (FILTER SIZE in chart above) followed by mm size, after the item number.**

Vector Star

Item # .....TIVS( )

Hyper Star

Item # .....TIHS( )

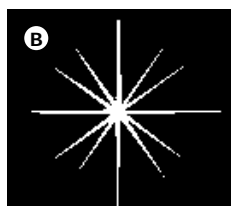
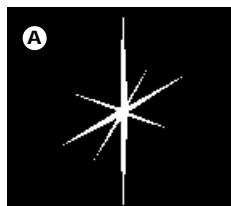
Hollywood Star

Item # .....TIHWS( )

North Star

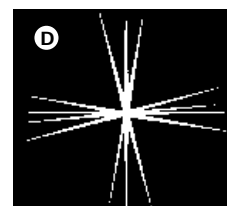
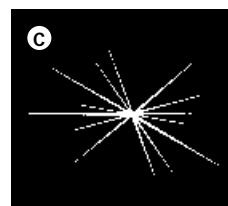
Item # .....TINS( )

**To order Hollywood F/X filters, insert the filter diameter (FILTER SIZE in chart above) after the item number.**



The different Hollywood F/X Effects:

- A. Vector Star
- B. North Star
- C. Hyper Star
- D. Hollywood Star



**We Ship Worldwide**



## SPECIAL EFFECTS FILTERS

### Pro-Mist Filters

#### Pro-Mist Filter

Creates dreamlike soft-focus effects. Alters images in 3 ways. Removes harsh edge off sharpness, introduces a bit of flare and produces a mild reduction in contrast. Available in 1/8, 1/4, 1/2, 1, 2, 3, 4 and 5 densities.

Item #.....TIPM( )

#### Warm Pro-Mist Filter

Combines the Pro-Mist and 812 Color Conversion filters. Tones down excessive sharpness, while adding warmth. Balances contrasting skintones within one scene. Available in 1/8, 1/4, 1/2, 1, 2, 3, 4, 5 densities.

Item #.....TIWPM( )

#### Black Pro-Mist Filter

Softening with more subtle flare than an equivalent graded Pro-Mist. Reduces contrast by combining modest lightening of shadows with darkening of highlights. Available in 1/8, 1/4, 1/2, 1, 2, 3, 4 and 5 densities.

Item #.....TIBPM( )

#### Warm Black Pro-Mist Filter

Combines Black Pro-Mist and the 812 filter. Reduces contrast by combining modest lightening of shadows with darkening of highlights, while adding warmth. Available in 1/8, 1/4, 1/2, 1, 2, 3, 4 and 5 densities.

Item #.....TIWBPM( )

**To order Pro-Mist filters, insert density number, followed by the filter diameter (FILTER SIZE in charts below) after the item number.**

### PRICES FOR PRO-MIST FILTERS

FILTER SIZES:	40.5	49	52	55	58	B60	62	67	72	77	82	CP
Pro-Mist 1, 2, 3	37.75	37.75	37.75	37.75	43.25	99.00	54.00	54.00	71.00	71.00	88.50	63.00
Warm Pro-Mist 1, 2, 3	37.75	37.75	37.75	37.75	43.25	99.00	54.00	54.00	71.00	71.00	88.50	63.00
Black Pro-Mist 1, 2, 3	37.75	37.75	37.75	37.75	43.25	99.00	54.00	54.00	71.00	71.00	88.50	63.00
Warm Blk Pro-Mist 1, 2, 3	37.75	37.75	37.75	37.75	43.25	99.00	54.00	54.00	71.00	71.00	88.50	63.00

FILTER SIZES:	S9	86	95	105	138	22	33	34	44	4.5	45P	45	55Q	56	66	6.6
Pro-Mist 1-5	114.95	124.95	225.95	225.95	259.95	119.95	119.95	166.95	166.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95
Pro-Mist 1/8, 1/4, 1/2	114.95	124.95	225.95	225.95	259.95	119.95	119.95	166.95	166.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95
Warm Pro-Mist 1-5	114.95	124.95	225.95	225.95	259.95	119.95	119.95	166.95	166.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95
Warm Pro-Mist 1/8, 1/4, 1/2	114.95	124.95	225.95	225.95	259.95	119.95	119.95	166.95	166.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95
Black Pro-Mist 1-5	114.95	124.95	225.95	225.95	259.95	119.95	119.95	166.95	166.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95
Black Pro-Mist 1/8, 1/4, 1/2	114.95	124.95	225.95	225.95	259.95	119.95	119.95	166.95	166.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95
Warm Black Pro-Mist 1-5	114.95	124.95	225.95	225.95	259.95	119.95	119.95	166.95	166.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95
Warm Black Pro-Mist 1/8, 1/4, 1/2	114.95	124.95	225.95	225.95	259.95	119.95	119.95	166.95	166.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95

### Fog and Double Fog Effect Filters

#### Fog Effect Filter

Creates or enhances the effect of a natural fog. Causes lights to flare and mist to appear. An even mist density is produced throughout the scene. Available in 1/8, 1/4, 1/2, 1, 2, 3, 4, 5 densities.

Item #.....TIF( )

#### Double Fog Effect Filter

Combines a soft fog with a heavy low contrast effect, allowing clearer detail than a standard fog filter, while maintaining a dense fog appearance. Available in 1/8, 1/4, 1/2, 1, 2, 3, 4, 5 densities.

Item #.....TIDF( )

**To order Fog and Double Effects filters, insert density number, followed by the filter diameter (FILTER SIZE in charts below) after the item number.**

### PRICES FOR TIFFEN FOG AND DOUBLE FOG EFFECT FILTERS

FILTER SIZES:	46	49	52	55	58	B60	62	67	72	77	82	CP
Fog Effect 1, 3	-	41.95	41.95	41.95	34.00	-	66.95	66.95	87.95	87.95	114.50	-
Dbl Fog Eff 3	27.25	27.25	27.25	27.25	34.00	88.00	44.50	44.50	58.95	58.95	84.95	68.50

FILTER SIZES:	S9	86	95	105	138	22	33	34	44	4.5	45P	45	55Q	56	66	6.6
Fog Effect 1, 2, 3	99.95	89.95	184.95	184.95	219.95	100.00	100.00	129.95	129.95	139.95	219.95	284.95	284.95	284.95	284.95	284.95
Fog Effect 1/8, 1/4, 1/2	99.95	89.95	184.95	184.95	219.95	100.00	100.00	129.95	129.95	139.95	219.95	284.95	284.95	284.95	284.95	284.95
Fog Effect 2, 4	99.95	89.95	184.95	184.95	219.95	100.00	100.00	129.95	129.95	139.95	219.95	284.95	284.95	284.95	284.95	284.95
Dbl Fog Eff 1, 2, 3	114.95	89.95	184.95	184.95	219.95	100.00	100.00	141.00	141.00	139.95	244.95	284.95	284.95	284.95	284.95	284.95
Dbl Fog Eff 1/8, 1/4, 1/2	114.95	89.95	184.95	184.95	219.95	100.00	100.00	141.00	141.00	139.95	244.95	284.95	284.95	284.95	284.95	284.95

# TIFFEN

## SPECIAL EFFECTS FILTERS

GLASS FILTERS

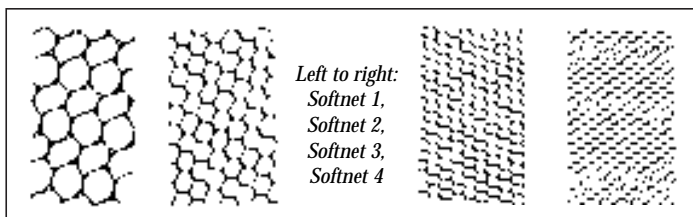
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### Softnet Filters

#### Softnet Black Filter

Net material laminated between optical clear glass. Creates a soft diffusion effect, while causing no halation from highlights. Dark areas remain dark. 1, 2, 3 and 4 densities.

Item #.....TISNB( )



#### Softnet White Filter

Net material laminated between optical clear glass. Creates soft diffusion, while adding a misty look. Produces halation from highlights; dark areas appear less dense. 1, 2, 3 and 4 densities.

Item #.....TISNW( )

### PRICES FOR SOFTNET FILTERS

FILTER SIZES:	40.5	49	52	55	58	B60	62	67	72	77	82	CP	33L	S9
Softnet Black 2, 4	57.50	28.00	28.00	28.00	35.00	88.00	44.50	44.50	58.50	58.50	64.75	68.50	98.00	64.75
Softnet White 2, 4	57.50	28.00	28.00	28.00	35.00	88.00	44.50	44.50	58.50	58.50	64.75	68.50	98.00	64.75

FILTER SIZES:	S9	86	95	105	138	22	33	34	44	4.5	45P	45	55Q	56	66	6.6
Softnet Black 1-4	100.00	89.95	186.00	186.00	219.95	100.00	100.00	139.95	141.00	139.95	219.95	284.95	284.95	284.95	284.95	284.95
Softnet White 1-4	100.00	89.95	186.00	186.00	219.95	100.00	100.00	139.95	141.00	139.95	219.95	284.95	284.95	284.95	284.95	284.95

### Soft/FX Filters

The ideal portrait improvement filters for photography and videography, the Soft/FX filters incorporate effective light softening technology that diminishes imperfections, smooths out wrinkles and skin blemishes, while keeping the overall appearance sharp. What makes the Soft/FX filters incomparable are the small lens-like elements within the glass which produce a light-scattering pattern that selectively defocuses details for a more sophisticated series of effects. The Soft/FX filter is available in five densities (1, 2, 3, 4, and 5) for creative flexibility. Density 1 provides subtle softening, while density 3 produces modest softening, with no reduction in contrast. With density 5, the effect is most dramatic on unwanted details. Details are diminished while highlights look luminous. The Warm Soft/FX combines the Soft/FX with the 812 in a single filter. An essential tool for professional portrait photographers and videographers.

#### Soft/FX Filter

The Soft/FX filter was designed to meet the special needs of portrait photography - weddings, graduations, family gatherings, corporate profiles, fashion and other creative softening applications.

Item #.....TISFX( )

#### Warm Soft/FX

The Warm Soft/FX warms skintones while at the same time selectively diffusing details for a soft, supremely flattering portrait that is not dulled or fuzzy. Available in 1, 2, 3, 4 and 5 densities.

Item #.....TIWSFX( )

**To order Soft/FX filters, insert density number, followed by the filter diameter (FILTER SIZE in charts below) after the item number.**

### PRICES FOR SOFT/FX FILTERS

FILTER SIZES:	37	43	49	52	55	58	B60	62	67	72	77	82	CP
Soft/FX 1-5	*31.50	*31.50	30.00	30.00	30.00	37.50	88.00	46.50	46.50	62.75	62.75	90.50	68.50
Warm Soft/FX 1-5	-	-	28.95	28.95	28.95	36.50	81.00	45.00	45.00	61.25	61.25	88.50	63.00

*\*Soft /FX 3 Only*

FILTER SIZES:	S9	86C	95	105	138	22	33	34	44	4.5	45P	45	55Q	56	66	6.6
Soft/FX ½	114.95	124.95	224.95	224.95	259.95	119.95	119.95	169.95	169.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95
Soft/FX 1-5	114.95	124.95	224.95	224.95	259.95	119.95	119.95	169.95	169.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95
Warm Soft/FX ½	114.95	124.95	224.95	224.95	259.95	119.95	119.95	169.95	169.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95
Warm Soft/FX 1-5	114.95	124.95	224.95	224.95	259.95	119.95	119.95	169.95	169.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95



### Controlling Contrast Filters

Whether on location or in the studio, your ability to control the contrast of your image is critical. Bright lights or sunlight create problems when the ratio between the highlight and shadow areas is beyond the latitude of the recording medium. If you expose for the highlights, the shadows appear without detail. If you expose for the shadows, the result is washed-out highlights. Contrast reduction can be achieved by lightening shadows without overexposing highlights or by darkening highlights without darkening shadows further. Tiffen Contrast filters alter highlight or shadow intensity levels for a more usable contrast range in film or video. To the untrained eye, loss of contrast may be equated with loss of sharpness. This is not true. These filters have no effect on sharpness, yet each alters your scene in a slightly different way.

**Soft Contrast** filters reduce contrast. This filter absorbs light, diminishing the highlighted areas while retaining the darker look of the shadow areas. In other words, the hot spots or bright areas of the image are reduced while the shadow areas remain dark, (black areas stay black), hence a reduction in contrast. This filter will cause a slight amount of flaring or halation.

**Low Contrast** filters work by spreading light from the highlights to the shadowed and darker areas, leaving the bright areas of the image bright. The dark areas are lighter, enabling you to see more detail in shadow areas. Because there is no f-stop compensation, you will not overexpose any portion of the image. This filter also creates a very slight flare or halation around hot spots or individual light sources. This feature can be a useful effect. The more light there is for the filter to work with, the greater the effect. Through the years, Low Contrast has been the filter of choice for people who shoot video but want to achieve more of a film look to their images.

**Ultra Contrast** filters work with ambient light from surroundings, as well as the light in the actual image area. They lower contrast uniformly throughout the scene, even when there are varying degrees of brightness within the image. Shadow areas are opened up, revealing more detail, but without any flare or halation from direct light sources or bright reflections.

**Low Light Ultra Contrast** filters have all the effects of the Ultra Contrast, for use in low-light situations.

**Soft Contrast Filter**

Available in 1, 2, 3, 4 and 5 densities.

Item #.....TISC( )

**Low Contrast Filter**

Available in 1/8, 1/4, 1/2, 1, 2, 3, 4 and 5 densities.

Item #.....TILC( )

**Ultra Contrast Filter**

Available in 1/8, 1/4, 1/2, 1, 2, 3, 4 and 5 densities.

Item #.....TIUC( )

**Low Light Ultra Contrast Filter**

Available in 1-4 densities.

Item #.....TILLUC( )



Unfiltered



Taken with a Soft Contrast filter



Taken with a Low Contrast filter



Taken with an Ultra Contrast filter

To order Controlling Contrast filters, insert density number, followed by the filter diameter (FILTER SIZE in charts below) after the item number.

### PRICES FOR TIFFEN CONTRAST FILTERS

FILTER SIZES:	37	40.5	43	46	49	52	55	58	B60	62	67	72	77	82	CP
Soft Contrast 1, 2, 3	-	57.50	-	27.25	27.25	27.25	27.25	35.00	88.00	44.50	44.50	58.50	-	64.75	68.50
Low Contrast 1, 2, 3	*25.50	57.50	*25.50	27.95	27.95	27.95	27.95	34.95	88.00	44.50	44.50	58.50	58.50	64.75	68.50
Ultra Contrast 1, 3, 5	-	-	-	37.75	37.75	37.75	37.75	43.25	99.00	54.00	54.00	71.00	71.00	91.00	63.00

\*Low Contrast 3 Only

FILTER SIZES:	S9	86	95	105	138	22	33	34	44	4.5	45P	45	55Q	56	66	6.6
Soft Contrast 1-5	99.95	89.95	184.95	184.95	219.95	100.00	100.00	139.95	139.95	139.95	219.95	284.95	284.95	284.95	284.95	284.95
Low Contrast 1/8, 1/4, 1/2	99.95	89.95	184.95	184.95	219.95	100.00	100.00	139.95	139.95	139.95	244.95	284.95	284.95	284.95	284.95	284.95
Low Contrast 1-5	99.95	89.95	184.95	184.95	219.95	100.00	100.00	139.95	139.95	139.95	219.95	284.95	284.95	284.95	284.95	284.95
Ultra Contrast 1-5	114.95	169.95	-	-	259.95	119.95	119.95	169.95	169.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95
Ultra Contrast 1/8, 1/4, 1/2	114.95	169.95	-	-	259.95	119.95	119.95	169.95	169.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95
Low Light Ultra Contrast 1-4	114.95	124.95	-	-	259.95	119.95	119.95	169.95	169.95	169.95	276.95	354.95	354.95	354.95	354.95	354.95



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# TIFFEN

## SPECIAL EFFECTS FILTERS

GLASS FILTERS

374

### Specialty Filters

#### Coral Filter

Warming filters available in 1/8, 1/4, 1/2, 1, 2, 3, 4, 5, 6, 7 and 8 densities. Used to adjust Kelvin temperature for different times of day. Also used to enhance skintones.

Item #.....TIC( )

#### LL-D Filter

Allows use of tungsten film in daylight without exposure compensation. For use with negative film for motion picture photography in conjunction with an optical printer.

Item #.....TILLD( )

#### Streak Effect Filter

Designed to enhance spectral highlights by creating a two-point streak effect. Produces an effect similar to a star filter. Improves a scene without effecting contrast.

Item #.....TIS( )

#### Hot Mirror

Digital cameras can have increased sensitivity to infrared light. The Hot Mirror remedies this by reflecting most infrared light, especially between 800 and 1200 nanometers.

Item #.....TIHM( )

### PRICES FOR SPECIALTY FILTERS

FILTER SIZES:	46	49	52	55	58	62	67	72	77	82
Hot Mirror	47.95	47.95	47.95	47.95	58.95	94.95	94.95	134.95	134.95	139.95

FILTER SIZES:	S9	86	95	105	138	22	33	34	44	4.5	45P	45	55Q	56	66	6.6
Coral 1/8, 1/4, 1/2, 1-5	99.95	89.95	184.95	184.95	219.95	99.95	99.95	129.95	139.95	139.95	219.95	284.95	284.95	284.95	284.95	284.95
LL-D	99.95	94.95	-	-	209.95	99.95	99.95	139.95	139.95	139.95	244.95	284.95	284.95	284.95	284.95	284.95
Streak 2,3mm, Drop-In	169.95	-	-	-	-	154.95	154.95	169.95	169.95	179.95	244.95	-	-	-	-	348.95
Streak 2,3mm, Rotating	179.95	182.95	-	-	-	-	-	-	-	244.95	-	-	-	-	-	-

### Solid Color Special FX Filters

#### Antique Suede 1-3

Item #.....TISCSFXAS( )

#### Grape 1-3

Item #.....TISCSFXGP( )

#### Tangerine 1-3

Item #.....TISCSFXT( )

#### Chocolate 1-3

Item #.....TISCSFXCH( )

#### Plum 1-3

Item #.....TISCSFXPL( )

#### Tobacco 1-3

Item #.....TISCSFXTO( )

#### Cranberry 1-3

Item #.....TISCSFXCR( )

#### Straw 1-3

Item #.....TISCSFXST( )

#### Tropic Blue 1-3

Item #.....TISCSFXTB( )



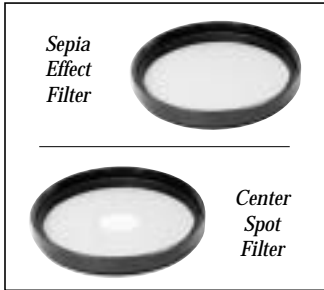
*To order Solid Color Special FX filters, insert the filter diameter (FILTER SIZE in chart below) to be followed by the intensity number, after the item number.*

### PRICES FOR SOLID COLOR SPECIAL FX FILTERS

FILTER SIZES:	S9	86	138	22	33	34	44	4.5	45P	45	55Q	56	66	6.6
Antique Suede 1, 2, 3	119.95	159.95	307.95	139.95	139.95	179.95	179.95	219.95	293.95	369.95	369.95	369.95	369.95	369.95
Chocolate 1, 2, 3	119.95	159.95	307.95	139.95	139.95	179.95	179.95	219.95	293.95	369.95	369.95	369.95	369.95	369.95
Cranberry 1, 2, 3	119.95	159.95	307.95	139.95	139.95	179.95	179.95	219.95	293.95	369.95	369.95	369.95	369.95	369.95
Grape 1, 2, 3	119.95	159.95	307.95	139.95	139.95	179.95	179.95	219.95	293.95	369.95	369.95	369.95	369.95	369.95
Plum 1, 2, 3	119.95	159.95	307.95	139.95	139.95	179.95	179.95	219.95	293.95	369.95	369.95	369.95	369.95	369.95
Straw 1, 2, 3	119.95	159.95	307.95	139.95	139.95	179.95	179.95	219.95	293.95	369.95	369.95	369.95	369.95	369.95
Tangerine 1, 2, 3	119.95	159.95	307.95	139.95	139.95	179.95	179.95	219.95	293.95	369.95	369.95	369.95	369.95	369.95
Tobacco 1, 2, 3	119.95	159.95	307.95	139.95	139.95	179.95	179.95	219.95	293.95	369.95	369.95	369.95	369.95	369.95
Tropic Blue 1, 2, 3	119.95	159.95	307.95	139.95	139.95	179.95	179.95	219.95	293.95	369.95	369.95	369.95	369.95	369.95

## SPECIAL EFFECTS FILTERS

### Miscellaneous Special Effects Filters



#### Center Spot Filter

A heavy diffusion filter with a clear circular spot in the center. Ideal for portraits or other situations where a clear central subject with a diffused, less distracting background is desired.

Item #.....TICS( )

#### Warm Center Spot Filter

Same as the Center Spot Filter, plus the added benefit of the #812 skin enhancing warm tone throughout the filter. For cameras with manual light metering, less than 1/3 stop compensating is required.

Item #.....TIWCS( )

#### Enhancing Filter

Creates brighter, more saturated reds, rust browns and oranges on film, with minimal effect to other colors. Made of didymium glass, it is ideal where red, brown and orange subjects should be enriched. Old rustic barns, flowers, earthtone rock formations, strawberries and tomatoes are some of the many possibilities in which this filter can improve color saturation. Most popular for capturing dramatic images of autumn. Changes in foliage color are enhanced for improved fall landscapes and picture postcard scenes. For cameras with manual light metering, 1/2 to 1 stop compensation is required.

Item #.....TIE( )

#### Sepia Effect Filter

Creates a warm brown tone and offers a "turn of the century" look to your scene. Sepia filters are available in densities 1, 2 and 3. #1 is a light effect. #2 and #3 offer the same denser color, but #3 combines a fog for enhanced effect.

Item #.....TIS( )

#### Close-Up Lens

Single element diopter lenses enable focusing on subjects much closer than the standard lenses. Great for detail photos of nature subjects and a wide range of situations. Available in several diopter strengths in special sizes and available in sets in common sizes.

Standard Size #.....TICUS( ) set

Special Size #.....TICU( ) each



Close-Up 1



Close-Up 2



Close-Up 3

To order miscellaneous filters, insert density number, followed by the filter diameter (FILTER SIZE in charts below) after the item number.

### PRICES FOR MISCELLANEOUS EFFECTS FILTERS

FILTER SIZES:	37	40.5	46	49	52	55	58	B60	62	67	72	77	82	CP
Center Spot	-	-	-	22.50	22.50	22.50	26.50	-	29.25	29.25	39.25	39.25	-	68.50
Warm Center Spot	-	37.75	37.75	37.75	37.75	37.75	43.25	99.00	54.00	54.00	71.25	71.25	101.75	63.00
Enhancing	46.95	48.95	48.95	48.95	48.95	48.95	74.95	109.95	78.50	78.50	90.50	90.50	99.95	222.00
Sepia 1, 2, 3	-	-	-	27.95	27.95	27.95	34.95	-	44.95	44.95	58.95	58.95	64.75	*68.50
Close-Up Lens Set (+1,+2,+4)	59.95	-	42.00	42.00	42.00	42.00	61.00	-	73.95	73.95	112.95	112.95	-	-

\* #1 and #3 only

FILTER SIZES:	S9	86C	95	105	138	22	33	34	44	4.5	45P	45	55Q	56	66	6.6
Enhancing	134.95	139.95	357.00	357.00	336.95	190.00	190.00	289.95	292.00	299.95	369.95	414.95	414.95	414.95	414.95	414.95
Sepia 1, 2, 3	99.95	89.95	186.95	186.00	219.95	100.00	100.00	139.95	144.50	139.95	219.95	284.95	284.95	284.95	284.95	284.95
Close-Up 1/2, 1, 2, 3	84.95	106.95	192.95	192.95	197.95	108.95	108.95	-	-	133.50	-	184.95	-	-	-	-
Close-Up Lens 4	97.95	-	-	-	-	-	-	-	-	184.95	-	-	-	-	-	-

### Intro Kits

Now you can save money by purchasing filters in a kit. The combination filter kits will meet your photographic demands. There is a filter for protection, warming, and saturating blue skies. Each kit contains a UV Protector, an 812 Color warming Filter, and a Circular Polarizer. The UV Protector protects your valuable lens against dust, moisture, scratches and breakage. It is recommended by camera and camcorder manufacturers. The exclusive 812 Color Warming Filter adds warmth to skintones for more flattering portraits. It is ideal when outdoors in

open shade and with an electronic flash. The Circular Polarizer deepens blue skies, reduces or eliminates glare and reflections on non-metallic surfaces. It is great for photographing water and through windows. Designed for cameras with "beam splitting" metering systems; for most 35mm auto-focus cameras.

#### Intro Kit

Item # ..... **TIIK**( )

*To order Intro Kits, insert the filter diameter (FILTER SIZE in charts below) after the item number.*

### PRICES FOR INTRO FILTERS

<b>37</b>	<b>46</b>	<b>49</b>	<b>52</b>	<b>55</b>	<b>58</b>	<b>62</b>	<b>67</b>	<b>72</b>	<b>77</b>	<b>82</b>
49.95	49.95	49.95	49.95	49.95	59.95	74.95	74.95	99.95	99.95	129.95

### Filter Pouches

**Tiffen Protective Organizer**  
The Protective Organizer can accommodate six screw-in filters up to 82mm, or six square filters up to 3 x 3", or up to twelve 3 1/2" computer floppy diskettes. It is made of heavy duty luggage-grade nylon with soft lining, and closes securely with velcro.  
Item # **TIFP6** ..... **14.95**



*Tiffen Protective Organizer*

#### F-64 FC 4-Pocket Filter Case

Heavily padded filter pouches are designed to protect and organize all filters (up to 3 1/4 x 3 1/4"). They can also be used to hold valuable computer disks. The FC (lower left) has four pockets. The FCX has eight pockets. Both models, when closed, will fit in most camera bags. Belt loops are provided, allowing both cases to be worn on optional accessory belt #AB. Available in black.

Item # **F6FC** ..... **9.95**

#### F-64 FCX 8-Pocket Filter Case

Item # **F6FCX** ..... **14.95**

## MC PHOTOGRAPHIC

MC Photographic filter wallets are as tough as they come — on the outside. Inside, they are softies! Thick, shock absorbing padding is combined with a soft, plush covering. They close securely with

velcro seals. Designed with unique clear partitions to quickly locate the right filter. An assortment of bright, recognizable colors, make it easy to locate each protected item.

MC filter wallets come in many colors. The codes for these colors are as follows:

**Black = B, Grey = G, Green = GR, Light Blue = LB, Light Green = LG, Navy = N, Orange = O, Red = R, Tan = T, Yellow = Y.**

*To order, please insert color code into blank space.*

#### Filter Wallet (0735\_)

Fits eight filters up to 62mm.

Item # **MCFW62** ..... **13.95**

#### Filter Wallet (0715\_)

Fits eight filters up to 72mm.

Item # **MCFW72** ..... **17.95**

#### Filter Wallet (0716\_)

Fits eight filters up to 82mm.

Item # **MCFW82** ..... **19.50**

#### Filter Wallet (0717\_)

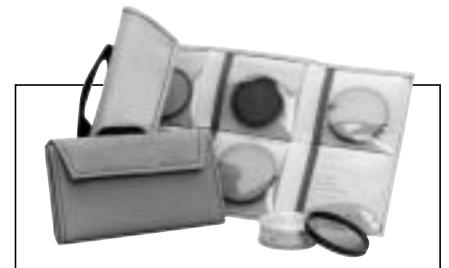
Fits eight filters up to 105mm.

Item # **MCFW105** ..... **19.95**

#### Filter Wallet (0745\_)

Fits five square filters up to 4x4".

Item # **MCFW44** ..... **22.95**



### Filter Holders

The filter holder is the key to the whole Cokin Creative Filter System. It is attached to the lens by the adapter ring and takes specially designed round or square filters, modular lens hoods and also the coupling ring.

The A system holder will accept 2 $\frac{1}{16}$  x 21 $\frac{1}{16}$ " (65 x 71cm) square filters, and the P system holder will accept 3 $\frac{1}{4}$  x 3 $\frac{1}{4}$  (83 x 83cm) square filters.

Screw the adapter ring into your lens. This ring is available in the following diameters for the A system: 36, 39, 40.5, 41, 42, 43, 43.5, 44, 46, 48, 49, 52, 54, 55, 58, 62 mm and Hasselblad B50. for the P system it is available in sizes of 48, 49, 52, 55, 58, 62, 67, 72, 77, 82 mm and Hasselblad B60.

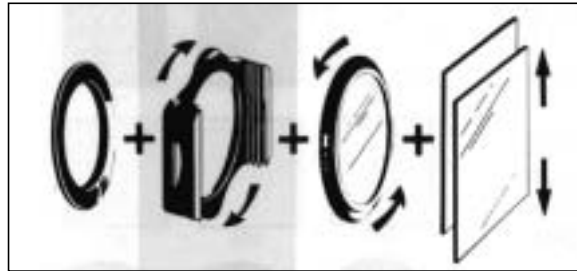
There is also a universal ring for both the A and P systems for special lenses of non-standard screw diameter and pitch.

Slide the filter holder over the adapter ring. It engages with a click that holds it firmly on your lens, and you can rotate your filter holder at will to the left or right.

Place the filter in the groove.

The narrowest groove nearest to the lens is for the serrated edge of round filters such as the Stars, Diffractors, Polarizers, etc. At a touch of the finder, the filter rotates about its axis for optimum adjustment. The other three grooves take square filters which you orientate however you want - sideways or vertically. Or you can add a coupling ring.

Adapter Ring, Filter Holder, Round Filter, Square Filter



Filter Holder A  
Item # COFHA.....3.95

Filter Holder A  
With 36-page book.  
Item # COFHAB36.....5.95

Filter Holder P  
With 36-page book.  
Item # COFHPB36.....7.95

Filter Holder A  
With 112-page book Blister Pack.  
Item # COBPA.....8.95

Filter Holder P  
With 112-page book.  
Item # COFHPB112.....10.95

112-Page Book Only  
Item # COB.....5.95

106-Page Spanish Book Only  
Item # COBSQ.....7.95

### Adapter Rings for Filter Holders

For "A" Filter Holder  
Item # COARA(Code).....(for price see chart)

For "P" Filter Holder  
Item # COARP(Code).....(for price see chart)

**To order Filter Holders, just insert filter diameter (CODE in chart below) after the item number of filter desired.**

#### FILTER HOLDER SPECIFICATIONS

SIZE	CODE	SERIES A	SERIES P	SIZE	CODE	SERIES A	SERIES P
36mm	36	5.95	-	54mm	54	5.95	-
39mm	39	5.95	-	55mm	55	4.95	9.95
40.5mm	40.5	5.95	-	58mm	58	4.95	9.95
41mm	41	5.95	-	62mm	62	6.95	9.95
42mm	42	5.95	-	67mm	67	-	9.95
43mm	43	5.95	-	72mm	72	-	9.95
43.5mm	43.5	5.95	-	77mm	77	-	9.95
44mm	44	5.95	-	82mm	82	-	9.95
46mm	46	5.95	-	Hass B50	B50	24.95	30.95
48mm	48	5.95	14.95	Hass B60	B60	-	30.95
49mm	49	4.95	9.95	Universal	U	19.95	25.95
52mm	52	4.95	9.95	Canon 35-70	C3570	8.95	-

# COKIN

## FILTERS

RESIN FILTERS

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### Filters

Can be slipped quickly in and out of Cokin holders.

A Series Filters

Item #.....COA( )

P Series Filters

Item #.....COP( )

**To order A or P filters, just insert Cokin filter number ( from chart below) after the item number of filter desired.**

### A AND P SERIES FILTER

COKIN CAT. #	DESCRIPTION	SERIES A	SERIES P	COKIN CAT. #	DESCRIPTION	SERIES A	SERIES P
001	Yellow	8.95	11.50	078	W/A Ctr Spot Red	-	13.95
002	Orange	8.95	11.50	081	Color Vaseline	13.50	-
003	Red	8.95	11.50	082	Color Diffuser	5.95	-
004	Green	8.95	11.50	083 (830)	Diffuser 1	10.49	13.95
005	Sepia	8.95	11.50	084 (840)	Diffuser 2	10.49	13.95
020	Blue (80A)	8.95	11.50	085	Diffuser 3	10.49	13.95
021	Blue (80B)	8.95	11.50	086	Pastel 1	10.49	13.95
022	Blue (80C)	8.95	-	087	Pastel 2	10.49	13.95
023	Blue (82A)	8.95	-	088	Color Diff Blue	9.95	-
024	Blue (82B)	8.95	-	089	Color Diff Solid	10.49	-
025	Blue (82C)	8.95	-	091	Dreams 1	16.95	24.00
026	Warm (81A)	8.95	11.50	092	Dreams 2	16.95	-
027	Warm (81B)	8.95	11.50	093	Dreams 3	16.95	24.00
028	Warm (81C)	8.95	11.50	101	Close-up +1	10.95	-
029	Orange (85A)	8.95	11.50	103	Close-up +3	10.95	15.95
030	Orange (85B)	8.95	11.50	111	Split Field +1	-	15.95
031	Orange (85C)	8.95	-	120	G1 Gray Graduated	12.95	15.95
036	FLW	7.25	-	121	G2 Gray Graduated	12.95	15.95
040	DiffraCTOR Cosmos	20.50	24.95	122	B1 Blue Graduated	12.95	15.95
042	DiffraCTOR Galaxy	-	-	123	B2 Blue Graduated	12.95	15.95
045	Sepia Light	8.95	11.50	124	T1 Tobacco Graduated	12.95	15.95
046	FLD	10.00	9.95	125	T2 Tobacco Graduated	12.95	15.95
047	Gold	7.50	9.95	126	M1 Mauve Graduated	12.95	-
050	Cyan	7.50	9.95	127	M2 Mauve Graduated	12.95	15.95
055	Star 16	13.50	16.95	128	P1 Pink Graduated	-	15.95
056	Star 8	13.50	16.95	129	P2 Pink Graduated	12.95	15.95
057	Star 4	13.50	16.95	130	E1 Emerald Graduated	12.95	-
058	Star 2	-	-	131	E2 Emerald Graduated	12.95	-
059	Softstar	13.50	16.95	132	Y1 Emerald Graduated	12.95	-
060	Incolor 1	9.95	12.95	133	Y2 Yellow Graduated	12.95	-
061	Incolor 2	9.95	12.95	150	Fog 1	12.95	15.49
062	Gray 1 Center Spot	9.95	-	151	Fog 2	12.95	15.49
063	Gray 2 Center Spot	9.95	12.95	152	Gray ND2x	8.95	10.95
064	Violet Center Spot	-	12.95	153	Gray ND4x	8.95	10.95
065	Green Center Spot	9.95	12.95	160	Linear Polarizer	19.49	29.49
066	Orange Center Spot	9.95	12.95	161	Red Polarizer	15.99	29.95
068	Red Center Spot	-	12.95	162	Blue Polarizer	-	29.95
070	W/A Center Spot	10.49	13.95	163	Yellow Polarizer	15.89	29.95
071	W/A Ctr Spot Inclr 2	-	13.95	164	Circular Polarizer	25.49	53.95
077	W/A Ctr Spot Blue	-	13.95	170	Variocolor Red/Grn	20.95	32.49

*A and P Series Filter continued on next page*

**All items are complete with all accessories as supplied by the manufacturer**



# COKIN FILTERS

RESIN FILTERS

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## A AND P SERIES FILTER, *continued*

COKIN CAT. #	DESCRIPTION	SERIES A	SERIES P	COKIN CAT. #	DESCRIPTION	SERIES A	SERIES P
171	Variocolor Red/Blue	20.95	32.49	340	Creative Mask	12.95	15.95
172	Variocolor Pink/Orange	20.95	32.49	342	Double Mask 1	12.95	-
173	Variocolor Blue/Yell	20.95	32.49	345	Double Mask 2	12.95	16.99
185	Radial Zoom	8.95	11.49	346	Double Exposure	7.49	8.95
186	Rainspot	7.95	9.95	375	Creative	23.49	29.95
187	Cyclone	7.95	-	376	Basic	-	20.95
189	Sunspot	7.95	9.95	397	Pre Shaped	15.49	20.95
190	Colorback Mauve	16.90	-	660	Fluor Grad Yellow Y1	12.95	15.49
192	Colorback Blue	16.90	-	661	Fluor Grad Yellow Y2	12.95	15.49
194	Gel Filter Holder	6.50	9.00	662	Fluor Grad Orange O1	12.95	15.49
195	Rainbow 1	13.95	15.95	663	Fluor Grad Orange O2	12.95	-
196	Rainbow 2	13.95	-	664	Fluor Grad Red R1	12.95	15.49
197	Sunset 1	15.00	19.49	665	Fluor Grad Red R2	12.95	15.49
198	Sunset 2	15.00	19.49	666	Fluor Grad Blue B1	12.95	15.49
201	Multi Image 5	20.95	26.49	667	Fluor Grad Blue B2	12.95	-
202	Multi Image 7	20.95	26.49	668	Fluor Grad Mauve M1	12.95	15.49
203	Multi Image 13	20.95	-	669	Fluor Grad Mauve M2	12.95	-
204	Multi Image 25	20.95	-	670	Fluor Grad Pink P1	12.95	15.49
209	Multi Parallel	24.49	29.95	671	Fluor Grad Pink P2	12.95	15.49
216	Speed	24.49	29.95	672	Pink/Blue Bi Color C.S.	12.95	-
217	Super Speed	24.49	29.95	673	Yellow/Pink Bi Color C.S.	12.95	-
220	Mirage	24.49	-	674	Blue/Yellow Bi Color C.S.	12.95	-
230	Skylight	-	9.95	694	Sun-soft	4.95	-

### System A Accessories

#### "A" Lens Cap

Fits into one of the slots of modular hood.

**Item # COLCA .....3.95**

#### "A" Adapter Cap

Fits onto adapter ring.

**Item # COACA .....3.95**

#### "A" Modular Hood

Suppresses unwanted flare. Clips directly on the filter holder. Hoods combine to match the focal length of lens.

**Item # COMHA .....7.95**

#### Lee Pro Hood 67 for Cokin A (PH67)

Collapsible bellows hood mounts onto filter holder A and it has a 4" slot for vignettors.

**Item # LEPH67 .....59.95**

#### "A" Coupling Ring & Filter Holder

Combines two filter holders, accepting up to 5 filters.

**Item # COCRA .....15.95**

#### "A" Storage Box

For 10 filters.

**Item # COSBA .....7.95**

#### Strap for Empty Storage Box

**Item # COSSB .....7.95**

#### Clip for Empty Storage Box

**Item # COCSB .....3.95**

### Extension Rings for Filter Holders

With some new SLR lenses and video cameras, it is impossible to screw a Cokin adapter ring onto the lens (when focusing, the lens retracts inside the lens barrel), thus the need for extension rings. Can be slipped quickly in and out of Cokin holders.

#### 46mm Extension Ring

**Item # COERA46 .....5.95**

#### 48mm Extension ring

**Item # COERA48 .....5.95**

#### 49mm Extension Ring

**Item # COERA49 .....5.95**

#### "P" Lens Cap

Fits into one of the slots of modular hood.

**Item # COLCP .....4.95**

#### "P" Adapter Cap

Fits onto adapter ring.

**Item # COACP .....4.95**

#### "P" Modular Hood

Suppresses unwanted flare. Clips directly on the filter holder. Hoods combine to match the focal length of lens.

**Item # COMHP .....9.95**

#### Lee Pro Hood 67 for Cokin P (PH84)

Collapsible bellows hood mounts onto filter holder and it has a 4" slot for vignettors.

**Item # LEPH84 .....59.95**

#### A to P Adapter

Allows a P System filter holder to accept System A filters.

**Item # COAPA .....9.95**

#### Adjustable Storage Compartments

Organizes over 80 P Series filters. Fits into a compartment case.

**Item # COSC .....26.95**

#### "P" Coupling Ring & Filter Holder

Combines two holders, accepting up to 5 filters.

**Item # COCRP .....22.95**



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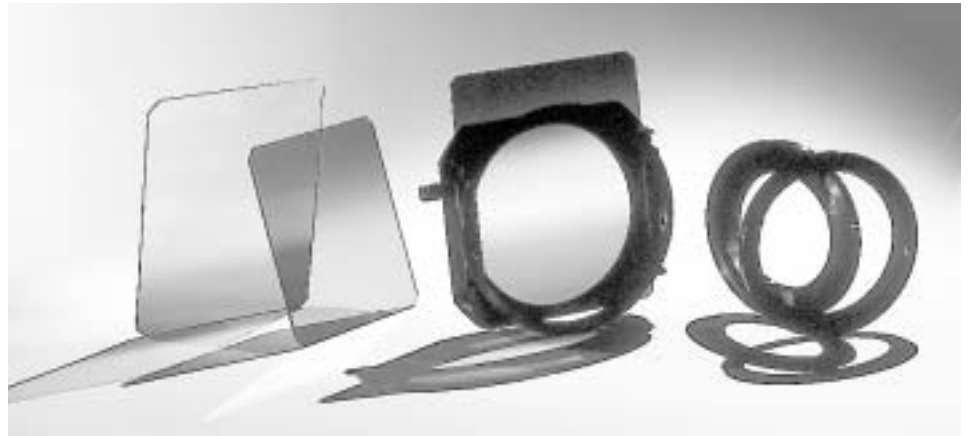
# HITECH

## FILTER HOLDERS AND ADAPTERS

RESIN FILTERS

380

The Hitech Resin filters are designed for the professional photographer and videographer. These filters are made of special C39 resin that transmits more light than glass filters and are lighter, unbreakable and scratch-resistant. The 4x4" (100 x 100mm) resin filters are 1½" mm thick and fit most filter holders, including the Hitech holder system which is completely machine crafted from aluminum, as are the adapters. The vast range of adapters, holders and hoods allow the system to be used on any format camera, from 35mm to 8x10, including on rear of view lenses.



### Filter Holder

**MK-4 4x4" (100 x 100mm) Standard Filter Holder (HT-1002)**  
Fits up to three 4" (100mm) filters, up to 2mm thick. With 105mm threaded front ring. (Requires adapter ring.)  
**Item # HIFH44.....136.00**

**MK-4 Wide Angle Filter Holder (HT-1004)**  
Fits up to two 4" (100mm) filters designed to be used with wide angle adapters to prevent vignetting with wide angle lenses.  
**Item # HIFHWA44.....124.00**

### Standard Lens Adapter Rings

**49mm Adapter Ring (HT-1019)**  
**Item # HIAR49.....35.95**

**52mm Adapter Ring (HT-1022)**  
**Item # HIAR52.....35.95**

**55mm Adapter Ring (HT-1025)**  
**Item # HIAR55.....35.95**

**58mm Adapter Ring (HT-1028)**  
**Item # HIAR58.....35.95**

**60mm Adapter Ring (HT-1031)**  
**Item # HIAR60.....35.95**

**62mm Adapter Ring (HT-1034)**  
**Item # HIAR62.....35.95**



**67mm Adapter Ring (HT-1037)**  
**Item # HIAR67.....35.95**

**72mm Adapter Ring (HT-1040)**  
**Item # HIAR72.....35.95**

**77mm Adapter Ring (HT-1043)**  
**Item # HIAR77.....35.95**

**82mm Adapter Ring (HT-1046)**  
**Item # HIAR82.....64.95**

**86mm Adapter Ring (HT-1049)**  
**Item # HIAR86.....64.95**

**95mm Adapter Ring (HT-1052)**  
**Item # HIAR95.....89.95**

**105mm Adapter Ring (HT-1055)**  
**Item # HIAR105.....89.95**

**Hasselblad B-50 Adapter Ring (HT-1058)**  
**Item # HIARB50.....64.95**

**Hasselblad B-60 Adapter Ring (HT-1061)**  
**Item # HIARB60.....64.95**

**Hasselblad B-70 Adapter Ring (HT-1064)**  
**Item # HIARB70.....64.95**

**Rollei B6 Adapter Ring (HT-1067)**  
**Item # HIARR6.....64.95**

### Wide Angle Adapters

These adapters are designed for lenses having a wide angle of view, although they can be used on any lens. Instead of protruding forward away from the lens, they recede backwards over the end of the lens, allowing the filter holder to sit much closer to the front element of the lens, thereby reducing the risk of vignetting.



**62mm Wide Angle Adapter Ring (HT-1085)**  
**Item # HIARWA62.....59.50**

**67mm Wide Angle Adapter Ring (HT-1088)**  
**Item # HIARWA67.....59.50**

**72mm Wide Angle Adapter Ring (HT-1091)**  
**Item # HIARWA72.....59.50**

**77mm Wide Angle Adapter Ring (HT-1094)**  
**Item # HIARWA77.....59.50**

**82mm Wide Angle Adapter Ring (HT-1097)**  
**Item # HIARWA82.....67.50**

**49mm Wide Angle Adapter Ring (HT-1070)**  
**Item # HIARWA49.....59.50**

**52mm Wide Angle Adapter Ring (HT-1073)**  
**Item # HIARWA52.....59.50**

**55mm Wide Angle Adapter Ring (HT-1076)**  
**Item # HIARWA55.....59.50**

**58mm Wide Angle Adapter Ring (HT-1079)**  
**Item # HIARWA58.....59.50**

**60mm Wide Angle Adapter Ring (HT-1082)**  
**Item # HIARWA60.....59.50**

**Hasselblad B-60 Wide Angle Adapter Ring (HT-1100)**  
**Item # HIARWAB60.....94.50**

Corporate Accounts Are Welcome

## F I L T E R S F O R B L A C K A N D W H I T E

### Rear Element Lens Adapters

Rear Element adapter rings fit Hitech filter holders to the back of most large format camera lenses.

<b>31.5mm Rear Element Adapter Ring</b> (HT-1103) <i>Item # H I A R R E 3 1 . 5</i> ..... <b>39.95</b>	<b>51mm Rear Element Adapter Ring</b> (HT-1127) <i>Item # H I A R R E 5 1</i> ..... <b>39.95</b>	<b>72mm Rear Element Adapter Ring</b> (HT-1148) <i>Item # H I A R R E 7 2</i> ..... <b>39.95</b>
<b>37.5mm Rear Element Adapter Ring</b> (HT-1106) <i>Item # H I A R R E 3 7 . 5</i> ..... <b>39.95</b>	<b>54mm Rear Element Adapter Ring</b> (HT-1130) <i>Item # H I A R R E 5 4</i> ..... <b>39.95</b>	<b>75mm Rear Element Adapter Ring</b> (HT-1151) <i>Item # H I A R R E 7 5</i> ..... <b>39.95</b>
<b>38mm Rear Element Adapter Ring</b> (HT-1109) <i>Item # H I A R R E 3 8</i> ..... <b>39.95</b>	<b>57mm Rear Element Adapter Ring</b> (HT-1133) <i>Item # H I A R R E 5 7</i> ..... <b>39.95</b>	<b>77mm Rear Element Adapter Ring</b> (HT-1154) <i>Item # H I A R R E 7 7</i> ..... <b>39.95</b>
<b>40.5mm Rear Element Adapter Ring</b> (HT-1112) <i>Item # H I A R R E 4 0 . 5</i> ..... <b>39.95</b>	<b>58mm Rear Element Adapter Ring</b> (HT-1136) <i>Item # H I A R R E 5 8</i> ..... <b>39.95</b>	<b>80mm Rear Element Adapter Ring</b> (HT-1157) <i>Item # H I A R R E 8 0</i> ..... <b>64.95</b>
<b>42mm Rear Element Adapter Ring</b> (HT-1115) <i>Item # H I A R R E 4 2</i> ..... <b>39.95</b>	<b>60mm Rear Element Adapter Ring</b> (HT-1139) <i>Item # H I A R R E 6 0</i> ..... <b>39.95</b>	<b>82mm Rear Element Adapter Ring</b> (HT-1160) <i>Item # H I A R R E 8 2</i> ..... <b>64.95</b>
<b>46mm Rear Element Adapter Ring</b> (HT-1118) <i>Item # H I A R R E 4 6</i> ..... <b>39.95</b>	<b>65mm Rear Element Adapter Ring</b> (HT-1142) <i>Item # H I A R R E 6 5</i> ..... <b>39.95</b>	<b>92mm Rear Element Adapter Ring</b> (HT-1163) <i>Item # H I A R R E 9 2</i> ..... <b>89.95</b>
<b>48mm Rear Element Adapter Ring</b> (HT-1121) <i>Item # H I A R R E 4 8</i> ..... <b>39.95</b>	<b>70mm Rear Element Adapter Ring</b> (HT-1145) <i>Item # H I A R R E 7 0</i> ..... <b>39.95</b>	<b>95mm Rear Element Adapter Ring</b> (HT-1166) <i>Item # H I A R R E 9 5</i> ..... <b>89.95</b>
<b>50mm Rear Element Adapter Ring</b> (HT-1124) <i>Item # H I A R R E 5 0</i> ..... <b>39.95</b>		<b>100mm Rear Element Adapter Ring</b> (HT-1169) <i>Item # H I A R R E 1 0 0</i> ..... <b>89.95</b>

### Filter Holder Accessories

- 105mm Rubber Lens Hood** (HT1010)  
For standard filter holder.  
*Item # H I L H R 1 0 5* .....**96.00**
- 105mm Metal Lens Hood** (HT1013)  
35mm deep for standard filter hood.  
*Item # H I L H M 1 0 5 3 5* .....**96.00**
- 105mm Metal Lens Hood** (HT1015)  
70mm deep for standard filter hood.  
*Item # H I L H M 1 0 5 7 0* .....**96.00**



- Adapter Cap** (HT1016)  
Fits front lens adapters when filter holder is taken off the adapter and adapter remains on lens.  
*Item # H I A C* .....**11.20**

### 4x4" Filters for Black and White

In black and white photography, filters can be used to reduce or eliminate atmospheric haze, to make more natural tonal reproduction in monochrome photographs, and to give deliberate emphasis to certain objects.

**#25 Red** - suppresses blue and brightens red. Also suppresses red lettering, red stamps, etc.

**#21 Orange** - accentuates red picture parts set off against green or blue. For example, it will make clouds brighter against the sky.

**#58 Green** - is generally used when improved reproduction of green is required. For example, when one takes shots of forests, gardens, and meadows, it improves green reproduction.

**#8 Yellow** - greatly increases contrast and is particularly useful for midday sun and deep shadow. It will accentuate clouds, considerably reduce haze and reproduce distance better.

**#11 Yellow-Green** - retains tonal values, but reduces haze and brightens green.

**#38 Light Blue** - is useful for correcting tendency of reds to reproduce too lightly under tungsten illumination; when used for portraiture, skin tones are more natural and modeling is improved.

**#47 Blue** - Accentuates haze and fog, creating dense, moody atmospheric effects in landscape and marine scenes.

### 4x4" FILTERS for BLACK and WHITE

COLOR	EXPOSURE	ITEM #	PRICE	COLOR	EXPOSURE	ITEM #	PRICE
25 Red	+3	HI2544	40.50	11 Yellow/Green	+1½ - 2	HI1144	40.50
21 Orange	+2 - 2½	HI2144	40.50	38 Light Blue	+½	HI3844	40.50
8 Yellow	+1	HI844	40.50	47 Dark Blue	+3	HI4744	40.50
58 Green	+2½	HI5844	40.50				

# H I T E C H

## F I L T E R S F O R B L A C K A N D W H I T E

RESIN FILTERS

382

### 4x4" UV for Black and White and Color

#### 1A Filter

Reduces bluish casts in open shade and filters out excessive green from shaded foliage.

Item # **HIUV1A44** .....**40.50**

#### 2B Filter

Absorbs ultraviolet radiation under clear sky conditions, reducing bluish casts with reversal film and haze with black & white.

Item # **HIUV2B44** .....**40.50**

### 4x4" Color Temperature Conversion Filters (CTC)

Used to convert the color temperature of a light source to balance with the film type in use. They may also be used to create an intentional "warm" or "cool" effect.

#### 4x4" COLOR TEMPERATURE CONVERSION FILTERS (CTC)

FILTER	EXPOSURE	CONVERSION	ITEM #	PRICE	FILTER	EXPOSURE	CONVERSION	ITEM #	PRICE
80A Blue	+2	3200°K to 5500°K	HI80A44	40.50	81EF Light Amber	+½	3850°K to 3200°K	HI81EF44	40.50
80B Blue	+1½	3400°K to 5500°K	HI80B44	40.50	82 Light Blue	+½	3100°K to 3200°K	HI8244	40.50
80C Blue	+1	3800°K to 5500°K	HI80C44	40.50	82A Light Blue	+½	3000°K to 3200°K	HI82A44	40.50
80D Blue	+¾	4200°K to 5500°K	HI80D44	40.50	82B Light Blue	+¾	2900°K to 3200°K	HI82B44	40.50
81 Light Amber	+½	3300°K to 3200°K	HI8144	40.50	82C Light Blue	+¾	2800°K to 3200°K	HI82C44	40.50
81A Light Amber	+½	3400°K to 3200°K	HI81A44	40.50	85 Amber	+¾	5500°K to 3400°K	HI8544	40.50
81B Light Amber	+½	3500°K to 3200°K	HI81B44	40.50	85B Amber	+¾	5500°K to 3200°K	HI85B44	40.50
81C Light Amber	+½	3600°K to 3200°K	HI81C44	40.50	85C Amber	+¾	5500°K to 3800°K	HI85C44	40.50
81D Light Amber	+¾	3700°K to 3200°K	HI81D44	40.50					

### 4x4" Color Conversion Filters (CC)

These are used singly or in combination to change the overall color balance for viewing or printing. The chart shows a guide to exposure increase you will require, in f-stops. All CC filters are available in 8 densities.

#### 4x4" COLOR CONVERSION FILTERS (CC)

DENSITY	.025	.05	.10	.15	.20	.30	.40	.50	ITEM #	PRICE
YELLOW	nil	nil	+½	+½	+½	+½	+½	+½	HICC( )Y44	40.50
MAGENTA	nil	+½	+½	+½	+½	+½	+½	+½	HICC( )M44	40.50
CYAN	nil	+½	+½	+½	+½	+½	+½	+1	HICC( )C44	40.50
RED	nil	+½	+½	+½	+½	+½	+½	+1	HICC( )R44	40.50
GREEN	nil	+½	+½	+½	+½	+½	+½	+1	HICC( )G44	40.50
BLUE	nil	+½	+½	+½	+¾	+¾	+1	+1½	HICC( )B44	40.50

*To order Hitech 4x4" Color Conversion filters, just insert filter density into item number in blank space.*

### 4x4" Fluorescent Correction Filters

#### FL-D Filter

A general correction filter for use with daylight films under fluorescent lighting.

Item # **HIFLD44**.....**40.50**

#### FL-B Filter

A general correction filter for use with Tungsten film under fluorescent lighting.

Item # **HIFLB44**.....**40.50**

*Hitech Resin Filters listed in this section are of the current 4 x 4" (100 x 100mm) and 4 x 5" (100 x 125mm) sizes. We also have 94 x 100mm sizes available by special order.*

**Most Orders Shipped Within 24 Hours**

## NEUTRAL DENSITY AND GRADUATED FILTERS

### 4x4" Neutral Density Filters (Gray)

Used in color and black & white photography to reduce the intensity of visible light by a known factor. They are extremely useful in pictorial photography when shooting at maximum apertures in bright light. Since ND filters uniformly reduce light of all wavelengths, there is no effect on the color rendition. They may be used singly or in multiples; the total filter density will equal the sum of the individual filter densities.

#### 4x4" NEUTRAL DENSITY FILTERS (GRAY)

DENSITY	TRANSMISSION	EXPOSURE	ITEM #	PRICE
ND 0.1	80%	+ $\frac{1}{2}$	HIND.144	54.00
ND 0.2	63%	+ $\frac{2}{3}$	HIND.244	54.00
ND 0.3	50%	+1	HIND.344	54.00
ND 0.6	25%	+2	HIND.644	54.00
ND 0.9	13%	+3	HIND.944	54.00
ND 1.2	6.3%	+4	HIND1.244	54.00

### 4x5" N.D. Graduated Filters



N.D. graduated filters are used to selectively darken an area at the top or bottom of the frame without changing colors. They are available in both soft and hard edge. They come in 4x5" (100 x 125mm), enabling the N.D. area to be placed in a specific area of the frame.

#### 4x5" N.D. GRADUATED FILTERS

DENSITY	EDGE	GRAD TO	ITEM #	PRICE
Grad ND 0.3	Soft	1 Stop	HIGND.3S45	54.00
Grad ND 0.6	Soft	2 Stop	HIGND.6S45	54.00
Grad ND 0.9	Soft	3 Stop	HIGND.9S45	54.00
Grad ND 1.2	Soft	4 Stop	HIGND1.2S45	54.00
Grad ND 0.3	Hard	1 Stop	HIGND.3H45	54.00
Grad ND 0.6	Hard	2 Stop	HIGND.6H45	54.00
Grad ND 0.9	Hard	3 Stop	HIGND.9H45	54.00
Grad ND 1.2	Hard	4 Stop	HIGND1.2H45	54.00

### 4x5" 2-Color Graduated Filters

Twilight, Sunset and Autumn filters are manufactured with a special combination process that merges 2 bands of color into 1 filter. Grad autumn filter is a combination of yellow and sepia, grad sunset is a combination of red and straw, and grad twilight is a combination of blue and pink, thus calling it a 2-color graduated filter.

2-Color Grad Autumn #1  
Item # HIGA145Q.....72.00

2-Color Grad Sunset #1  
Item # HIGSS145 .....72.00

2-Color Grad Autumn #2  
Item # HIGA245Q.....72.00

2-Color Grad Sunset #2  
Item # HIGSS245 .....72.00

2-Color Grad Autumn #3  
Item # HIGA345Q.....72.00

2-Color Grad Sunset #3  
Item # HIGSS345 .....72.00



2-Color Grad Twilight #1  
Item # HIGTL145.....72.00

2-Color Grad Twilight #2  
Item # HIGTL245.....72.00

2-Color Grad Twilight #3  
Item # HIGTL345.....72.00

# H I T E C H

## G R A D U A T E D F I L T E R S

### 4x5" Color Graduated Filters

These filters are used to selectively tone down bright areas and are available in 3 densities, soft or hard-edged.

Color Grad Apricot #1 (85B) Item # HIGA145 .....45.00	Color Grad Cool Blue #1 Item # HIGCB145.....45.00	Color Grad Red #1 Item # HIGR145 .....45.00	Color Grad Straw #3 Item # HIGST345 .....45.00
Color Grad Apricot #2 Item # HIGA245 .....45.00	Color Grad Cool Blue #2 (80A) Item # HIGCB245.....45.00	Color Grad Red #2 Item # HIGR245 .....45.00	Color Grad Tobacco #1 Item # HIGTO145 .....45.00
Color Grad Apricot #3 Item # HIGA345 .....45.00	Color Grad Coral #1 Item # HIGC145 .....45.00	Color Grad Red #3 (25) Item # HIGR345 .....45.00	Color Grad Tobacco #2 (81EF) Item # HIGTO245 .....45.00
Color Grad Cerise #1 Item # HIGC145Q.....45.00	Color Grad Coral #2 (85) Item # HIGC245 .....45.00	Color Grad Sepia #1 Item # HIGS145.....45.00	Color Grad Tuscany Pink #1 Item # HIGTP145.....45.00
Color Grad Cerise #2 Item # HIGC245Q.....45.00	Color Grad Coral #3 Item # HIGC345 .....45.00	Color Grad Sepia #2 Item # HIGS245.....45.00	Color Grad Tuscany Pink #2 Item # HIGTP245.....45.00
Color Grad Cerise #3 Item # HIGC345Q.....45.00	Color Grad Orange #1 Item # HIGO145.....45.00	Color Grad Sepia #3 Item # HIGS345.....45.00	Color Grad Yellow #1 Item # HIGY145 .....45.00
Color Grad Chocolate #1 Item # HIGCH145 .....45.00	Color Grad Orange #2 Item # HIGO245.....45.00	Color Grad Sky Blue #2 Item # HIGSB245 .....45.00	Color Grad Yellow #2 Item # HIGY245 .....45.00
Color Grad Chocolate #2 Item # HIGCH245 .....45.00	Color Grad Orange #3 (21) Item # HIGO345.....45.00	Color Grad Straw #1 Item # HIGST145 .....45.00	Color Grad Yellow #3 Item # HIGY345 .....45.00
Color Grad Chocolate #3 Item # HIGCH345.....45.00		Color Grad Straw #2 Item # HIGST245 .....45.00	

### 4x5" Combination Graduated Filters

Combination Graduated filters are overall warming filters (81B or 81EF) with gradual neutral density combined in one filter. They are used by photographers and videographers who prefer using fewer filters between the subject and the film. It is also used as a cost saver.



Taken with a Graduated Neutral Density filter. Note darkening on upper portion of picture.

Combination Grad 81B + ND 0.3 Item # HIG81BND.345....72.00	Combination Grad Autumn #3 + ND 0.3 Item # HIGA3ND.345 .....82.50
Combination Grad 81B + ND 0.6 Item # HIG81BND.645....72.00	Combination Grad Autumn #3 + ND 0.6 Item # HIGA3ND.645 .....82.50
Combination Grad 81B + ND 0.9 Item # HIG81BND.945....72.00	Combination Grad Autumn #3 + ND 0.9 Item # HIGA3ND.945 .....82.50
Combination Grad 81EF + ND 0.3 Item # HIG81EFND.34....72.00	Combination Grad Sunset #3 + ND 0.3 Item # HIGSS3ND.345....82.50
Combination Grad 81EF + ND 0.6 Item # HIG81EFND.64....72.00	Combination Grad Sunset #3 + ND 0.6 Item # HIGSS3ND.645....82.50
Combination Grad 81EF + ND 0.9 Item # HIG81EFND.94....72.00	Combination Grad Sunset #3 + ND 0.9 Item # HIGSS3ND.945....82.50

## S P E C I A L E F F E C T F I L T E R S

### 4x4" Movie Mist (Diffusing) Filters

These filters were originally designed for the motion picture market, but have become very popular in the still market-place. The diffusion effect is created by a very fine dot pattern, the reproducibility of which is controlled by a laser system. These filters are available in

black and clear, in density range of 1-4, allowing you to create effects ranging from subtle to dramatic. Density #1 and #2 is recommended for portrait work. #3 and #4 are used to create a definite effect rather than a subtle softening and is recommended for landscape.

- Movie Mist Clear #1  
Item # HIMMC144.....40.50
- Movie Mist Clear #2  
Item # HIMMC244.....40.50
- Movie Mist Clear #3  
Item # HIMMC344.....40.50
- Movie Mist Clear #4  
Item # HIMMC444.....40.50



- Movie Mist Black #1  
Item # HIMMB144.....40.50
- Movie Mist Black #2  
Item # HIMMB244.....40.50
- Movie Mist Black #3  
Item # HIMMB344.....40.50
- Movie Mist Black #4  
Item # HIMMB444.....40.50

### 4x4" Softnet Filters

Softnet white filters are made from net material, which is part of the resin. It creates a soft diffusion effect while adding a misty look. Produces halation from highlights; dark areas appear less dense.

Softnet black filters are also made from net material, which is part of the resin. It creates a soft diffusion effect while causing no halation from highlights. Dark areas remain dark.

- |   |   |  |  |
|---|---|--|--|
| Softnet White #1<br>Item # HISNW144.....37.50 | Softnet White #2<br>Item # HISNW244.....37.50 | Softnet Black #1<br>Item # HISNB144 .....37.50 | Softnet Black #2<br>Item # HISNB244 .....37.50 |
|---|---|--|--|

### 4x4" Fog Filters

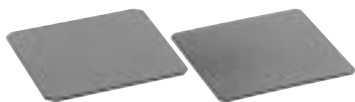
The fog effect filter creates or enhances the effect of a natural fog. Fog filters have the ability to cause lights to flare and "mist" to appear

where none previously existed. An even mist density is produced throughout the scene.

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| Fog #1<br>Item # HIF144.....37.50 | Fog #2<br>Item # HIF244.....37.50 |
|-----------------------------------|-----------------------------------|

### 4x4" Enhancing Filters

Red enhancer amplifies the red part of the spectrum, giving red objects more visual impact. Super enhancer amplifies on a broad basis the warm part of the spectrum. Ideal for achieving more aesthetic skin tones.



- Enhancer  
Item # HIE44 .....240.00
- Super Enhancer  
Item # HISE44 .....405.00

### 4x4" Star Filters

Star filters produce a star effect from many different light sources. Bright star line effects, which generate excitement and can enhance mood and glamour, are created from either original light sources or bright reflections. A suitable light source is not always obvious. Star



- 4 Point Star  
Item # HIS444.....40.50
- 6 Point Star  
Item # HIS644.....40.50

filters are frequently used to add sparkle to a water scene, candle flames, stadium spotlights, product photography of jewelry and crystal, street lamp scenes, sequined clothing, reflections off automobiles and contemporary architecture.

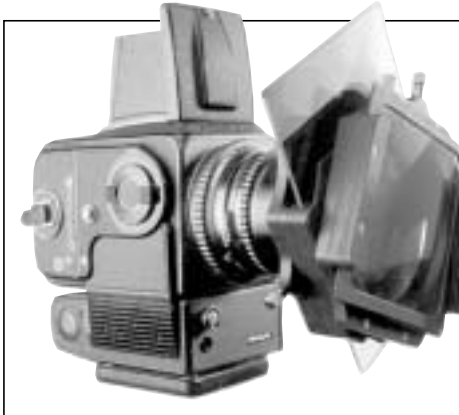
### Blank Filters

Drill, smear with resins, oils, adhesives or just about any substance to create your own unique effects. Available in standard and graduate sizes - the latter being suitable for the production of adjustable zones.



- 4x4" Blank Filter  
Item # HIB44 .....19.50
- 4x5" Blank Filter  
Item # HIB45 .....22.50

## FILTER HOLDERS AND ADAPTERS



The Lee Filter system represents the total approach to filtration in stills photography. It is a package designed to enable you to choose exactly the components you want, to create the optimum setup to suit your individual photographic needs. Everything has been planned into the system to provide flexibility and performance.

There is a filter holder with removable guides which enable you to decide which combinations of filters, from gels up to 4mm in thickness, would be most suitable for your needs: a key element of the design enables the holder to rotate so that you can make the most of filter effects. Additionally, it clips easily on and off the camera - an important feature for the user.

The advantage of being able to rotate filters in the holder is enhanced when two or more holders are fitted together to accept additional filters.

The system also features a unique lightweight lens hood which operates without the restrictions of rails or guides.

### Resin Filter Holders

#### Foundation Kit (FK)

Consists of a back plate, a pair of back cover plates, 4 pairs of filter holder guides (to hold gel filters up to 1mm thick, to hold filters 1.5-2mm thick and 2 guides to hold filters from 2 to 4mm thick), a pair of front cover plates, 4 screws, a screw driver and a carry pouch. Requires lens adapter ring.

**Item # LEFK.....94.95**

#### Upgrade Kit (UK)

Enables a second holder to slide onto the front of the Foundation Kit, allowing additional filters to be placed and rotated in front of the lens. The Upgrade Kit consists of a back plate, 2 pairs of back cover plates, 4 pairs of filter holder guides, a pair of front cover plates, 8 screws, a tandem adapter and a carry pouch. Requires lens adapter ring.

**Item # LEUK.....119.95**

#### Professional Kit (PK)

Contains both the Foundation Kit and Upgrade Kit.

**Item # LEPK.....179.95**

*Lens Hood with Two Filter Slots*



#### Lens Hood (LH)

A unique lightweight bellows lens hood which operates without the restrictions of rails and guides. On both the Upgrade and Foundation Kits, the lens hood simply slides into place at the front of the holder. The hood can also be fitted directly to the lens when using the adapter ring. Lens hood is rotatable.

**Item # LELH.....96.00**

#### Lens Hood with One Filter Slot (LHS)

Same as Lens Hood, but with rear filter slot to fit 4" 2mm thick Lee filters and front slot to fit 4½" vignettes.

**Item # LELHFS.....108.00**

#### Lens Hood with Two Filter Slots (LH2S)

Same as above, with two filter slots to fit Lee 4" 2mm thick filters.

**Item # LELHFS2.....116.00**

#### Wide Angle Lens Hood (WALH)

**Item # LELHWA.....219.95**

#### Wide Angle Lens Hood with One Filter Slot (WALHS)

**Item # LELHWAFS.....229.95**

#### Wide Angle Lens Hood with Two Filter Slots (WALH2S)

**Item # LELHWAFS2.....229.95**

*For lens hoods for Cokin, see Cokin.*

### Lens Adapter Rings

#### 49mm Adapter Ring

**Item # LEAR49.....37.95**

#### 52mm Adapter Ring

**Item # LEAR52.....37.95**

#### 55mm Adapter Ring

**Item # LEAR55.....37.95**

#### 58mm Adapter Ring

**Item # LEAR58.....37.95**

#### 93mm Adapter Ring

**Item # LEAR93.....96.95**

#### 95mm Adapter Ring

**Item # LEAR95.....96.95**

#### 105mm Adapter Ring

**Item # LEAR105.....96.95**

#### 112mm Adapter Ring

**Item # LEAR112.....199.95**



#### 62mm Adapter Ring

**Item # LEAR62.....37.95**

#### 67mm Adapter Ring

**Item # LEAR67.....37.95**

#### 72mm Adapter Ring

**Item # LEAR72.....37.95**

#### 77mm Adapter Ring

**Item # LEAR77.....37.95**

#### 82mm Adapter Ring

**Item # LEAR82.....68.50**

#### 86mm Adapter Ring

**Item # LEAR86.....68.50**

#### Hasselblad B50 Adapter Ring

**Item # LEARB50.....68.50**

#### Hasselblad B60 Adapter Ring

**Item # LEARB60.....68.50**

#### Hasselblad B70 Adapter Ring

**Item # LEARB70.....68.50**

#### Rollei B6 Adapter Ring

**Item # LEARB6.....96.95**

#### Series 7 Adapter Ring

**Item # LEARS7.....199.95**

#### Series 9 Adapter Ring

**Item # LEARS9.....96.95**



## F I L T E R S   B L A C K   A N D   W H I T E

### Wide Angle Adapter Rings

49mm Wide Angle Adapter Ring  
Item # **LEARWA49**.....**61.95**

58mm Wide Angle Adapter Ring  
Item # **LEARWA58**.....**61.95**

58mm and 55mm Wide Angle Adapter Rings



52mm Wide Angle Adapter Ring  
Item # **LEARWA52**.....**61.95**

62mm Wide Angle Adapter Ring  
Item # **LEARWA62**.....**61.95**

72mm Wide Angle Adapter Ring  
Item # **LEARWA72**.....**61.95**

55mm Wide Angle Adapter Ring  
Item # **LEARWA55**.....**61.95**

67mm Wide Angle Adapter Ring  
Item # **LEARWA67**.....**61.95**

77mm Wide Angle Adapter Ring  
Item # **LEARWA77**.....**61.95**

82mm Wide Angle Adapter Ring  
Item # **LEARWA82**.....**69.50**

### Accessories

Cardboard mounts will fit other size polyester or gel filters, to fit into 4x4" (100 x 100mm) filter slot.

3x3" (75 x 75mm) 10 Cardboard Mounts  
Item # **LECBM33**.....**19.95**

Side Guides 1mm (Pair) Replacement.  
Item # **LESG1**.....**3.50**

7/8" Screws (4)  
Item # **LES78**.....**1.95**

Spring Clip Housing (SCH)  
Item # **LESCH**.....**18.00**

4x4" (100 x 100mm) 10 Cardboard Mounts  
Item # **LECBM44**.....**19.95**

Side Guides 2mm (Pair) Replacement.  
Item # **LESG2**.....**3.50**

3/4" Screws (4)  
Item # **LES34**.....**1.95**

Filter Holder Vignetting Kit  
Item # **LEFHVK**.....**6.95**

3 1/4 x 3 1/4" (84 x 84mm) 3 Cardboard Mounts for Cokin P  
Item # **LECBMCP**.....**7.95**

Side Guides 4mm (Pair) Replacement.  
Item # **LESG4**.....**3.50**

5/8" Screws (4)  
Item # **LES58**.....**1.95**

Lens Hood Rails with Screws  
Item # **LERLH**.....**8.95**

3 1/4 x 4" (84 x 99mm) 3 Cardboard Mounts for Cokin P XL  
Item # **LECBMCPXL**.....**9.95**

Tandem Adapter  
The Tandem adapter allows the joining together of two filter holders, to enable the mounting of a total of 7 filters.  
Item # **LETA**.....**29.95**

1/2" Screws (4)  
Item # **LES.5**.....**1.95**

Filter Cleaning Solution (60ml)  
Item # **LEFC**.....**5.95**

Hi-Tech Filter Extension Slides (6)  
Item # **LEES**.....**9.95**

Tandem Adapter



4x4" Filter Pouch Replacement.  
Item # **LEFP44**.....**8.00**

4x6" Filter Pouch Replacement.  
Item # **LEFP46**.....**8.00**

### 4x4 Filters for Black and White Film

The resin filter is an alternative to the old type of glass "sandwich" filters - two pieces of glass with gelatin in between - which are bulky and prone to break or separate if dropped.

Lee resins are made of lightweight, optically correct polymeric materials which are robust, easy-to-handle and just wipe clean.

Every resin filter is hand made by a skilled technician, using the purest of dyestuffs to ensure accurate and consistent color rendition.

Resin filters in the Lee Filter system are sub-divided into various groups, with names reflecting their function. The most widely used are color effect, graduated filters, stripes and special effects.



Light Yellow #3  
Item # **LE344**.....**69.95**

Yellow #8  
Item # **LE844**.....**69.95**

Yellow Orange #16  
Item # **LE1644**.....**69.95**

Yellow Green #11  
Item # **LE1144**.....**69.95**

Orange #21  
Item # **LE2144**.....**69.95**

Deep Yellow #12  
Item # **LE1244**.....**69.95**

Light Red #23A  
Item # **LE23A44**.....**69.95**

Deep Yellow #15  
Item # **LE1544**.....**69.95**

Red #25  
Item # **LE2544**.....**69.95**

### 4x4" Resin Color Temperature Adjustment Filters

These filters are used both to convert the color temperature of a light source to balance with the film type in use, and to create an intentional warm or cool effect.

RESIN COLOR TEMPERATURE ADJUSTMENT FOR 4X4" FILTERS					
	No.	Approximate Exposure Increase	Conversion	Item #	Price
BLUE for Major Adjustment	80A	2	3200 K to 5500 K	LE80A44	49.95
	80B	1½	3400 K to 5500 K	LE80B44	49.95
	80C	1	3800 K to 5500K	LE80C44	49.95
	80D	½	4200K to 5500 K	LE80D44	49.95
PALE BLUE for Fine Adjustment	82	½	3100 K to 3200 K	LE8244	49.95
	82A	½	3000 K to 3200 K	LE82A44	49.95
	82B	¾	2900 K to 3200 K	LE82B44	49.95
	82C	¾	2800 K to 3200 K	LE82C44	49.95
AMBER for Major Adjustment	85	¾	5500 K to 3400 K	LE8544	49.95
	85B	¾	5500 K to 3200 K	LE85B44	49.95
	85C	½	5500 K to 3800 K	LE85C44	49.95
PALE AMBER for Fine Adjustment	81	½	3300 K to 3200 K	LE8144	49.95
	81A	½	3400 K to 3200 K	LE81A44	49.95
	81B	½	3500 K to 3200 K	LE81B44	49.95
	81C	½	3600 K to 3200 K	LE81C44	49.95
	81D	¾	3700 K to 3200 K	LE81D44	49.95
	81EF	¾	3850 K to 3200 K	LE81EF44	49.95

### 4x4" Resin Coral Filters

These are warming filters available in a wide range of densities. Used to adjust Kelvin temperature for different times of day. Also used as a warming filter to enhance skintones.

4X4" RESIN CORAL FILTER SPECIFICATIONS			
FILTER	KELVIN TEMPERATURE	ITEM #	PRICE
Coral #1	4545° K	LEC144	49.95
Coral #2	4225° K	LEC244	49.95
Coral #3	4000° K	LEC344	49.95
Coral #4	3774° K	LEC444	49.95
Coral #5	3570° K	LEC544	49.95
Coral #6	3390° K	LEC644	49.95
Coral #7	3225° K	LEC744	49.95
Coral #8	3076° K	LEC844	49.95
Coral #9	3941° K	LEC944	49.95
Coral #10	2817° K	LEC1044	49.95
Coral #11	2703° K	LEC1144	49.95
Coral #12	2597° K	LEC1244	49.95
Coral #13	2500° K	LEC1344	49.95
Coral #14	2409° K	LEC1444	49.95

## FLUORESCENT, COLOR COMPENSATING AND NEUTRAL DENSITY FILTERS

### 4x4" Fluorescent Correction Filters

This system offers filter solutions to many fluorescent correction problems. Both color temperature conversion and green absorption functions are combined into one filter. The filter used depends on tube and film type. In mixed lighting conditions, tests using a color meter are recommended.

#### FLUORESCENT CORRECTION FILTERS

Film Type	Filter	Approximate Exposure Increase	Conversion	Item #	Price
TUNGSTEN (3200K)	FL 57-B	1 1/2 Stops	5700K to Tungsten	LEFLB570044	59.95
	FL 43-B	1 Stop	4300K to Tungsten	LEFLB430044	59.95
	FL 36-B	2/3 Stop	3600K to Tungsten	LEFLB360044	59.95
DAYLIGHT (5500K)	FL 57-D	2/3 Stop	5700K to Daylight	LEFLD570044	59.95
	FL 43-D	1 Stop	4300K to Daylight	LEFLD430044	59.95
	FL 36-D	1 1/2 Stop	3600K to Daylight	LEFLD360044	59.95

### 4x4" Color Compensating Filters (CC)

Recommended for use in front of or behind the camera lens, these filters control the spectrum by reducing the transmission at specific wavelengths. They are primarily used to color balance films - the required filter being determined as a result of tests, or as specified by the manufacturer. They can also be useful for correcting light sources for which no one conversion filter exists, or for adding a deliberate color bias.

Color Compensating Filter  
Cyan  
Item # LECC( )C44 ....49.95

Color Compensating Filter  
Magenta  
Item # LECC( )M44 ...49.95

Color Compensating Filter  
Red  
Item # LECC( )R44 ....49.95

Color Compensating Filter  
Green  
Item # LECC( )G44 ....49.95

Color Compensating Filter  
Yellow  
Item # LECC( )Y44.....49.95

*To order Lee Color Compensating filters, just insert filter diameter (from charts below) after the blank space.*

Color Compensating Filter  
Blue  
Item # LECC( )B44.....49.95

### 4x4" COLOR COMPENSATING FILTERS

	APPROXIMATE EXPOSURE INCREASE IN STOPS									
	025	05	10	15	20	25	30	40	50	
Cyan	Nil	1/3	1/3	1/3	1/3	1/3	2/3	2/3	2/3	Principally absorbs Red
Yellow	Nil	Nil	1/3	1/3	1/3	1/3	1/3	1/3	1/3	Principally absorbs Blue
Magenta	Nil	1/3	1/3	1/3	2/3	2/3	2/3	1	1	Principally absorbs Green
Red	Nil	1/3	1/3	1/3	2/3	2/3	2/3	1	1	Principally absorbs Blue & Green
Green	Nil	1/3	1/3	1/3	1/3	1/3	1/3	2/3	2/3	Principally absorbs Blue & Red
Blue	Nil	1/3	1/3	1/3	2/3	1	1 1/2	1 1/2	1 1/2	Principally absorbs Red & Green

### 4x4" Neutral Density Filters (ND)

These filters reduce light transmission uniformly over the visible region of the spectrum, in definitive steps. Although used mainly in color photography for reducing light levels without color change, they can also be

used for black and white photography. They are particularly useful for compensating for too much light, in circumstances where changing the shutter speed, aperture or film type is neither possible or desirable.

Neutral Density 0.3 (1 Stop)  
Item # LEND.344.....60.00

Neutral Density 0.6 (2 Stops)  
Item # LEND.644.....60.00

Neutral Density 0.9 (3 Stops)  
Item # LEND.944.....60.00



## NEUTRAL DENSITY AND GRADUATED FILTERS

RESIN FILTERS

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### Neutral Density Combination Filters

Neutral density combination filters reduce light transmission, while warming at the same time.

81EF Combination ND.3  
Item # **LE81EFND.344...94.95**

85 Combination ND.3  
Item # **LE85ND.344 .....94.95**

81EF Combination ND.6  
Item # **LE81EFND.644...94.95**

85 Combination ND.6  
Item # **LE85ND.644 .....94.95**

81EF Combination ND.9  
Item # **LE81EFND.944...94.95**

85 Combination ND.9  
Item # **LE85ND.944 .....94.95**



85B Combination ND.3  
Item # **LE85BND.344.....94.95**

85B Combination ND.6  
Item # **LE85BND.644.....94.95**

85B Combination ND.9  
Item # **LE85BND.944.....94.95**

### 4x6" Graduated Filters

Graduated filters feature an area of color or effect at one end of the resin, but clear at the other end. This enables the color or effect to be placed in a specific area of the frame.

Three types of graduation are available: soft, in which the transition from color to clear is very slow; hard, where the transition is rapid; and blenders, with the graduation covering the entire area of the filter.

Graduated filters come in 4x6" (100 x 150mm). This enables the color or effect to be placed in a specific area of the frame, and of-course with the rotating system filters, can be placed in any position desired.

One of the most popular grads is the Sky Blue filter, which, if used on a dull or gray day, can transform an uninspiring sky to a summery blue. *The following grad filters are available in densities 1 through 5:*

Grad Soft Sky Blue  
Item # **LEGSB( )S46.....49.95**

Grad Hard Magenta  
Item # **LEGM( )H46.....49.95**

Grad Hard Sky Blue  
Item # **LEGSB( )H46.....49.95**

Grad Soft Red  
Item # **LEGR( )46.....49.95**

Grad Soft Blue  
Item # **LEGBL( )46.....49.95**

Grad Soft Chocolate  
Item # **LEGCH( )S46.....59.95**

Grad Soft Magenta  
Item # **LEGM( )S46.....49.95**

Grad Hard Chocolate  
Item # **LEGCH( )H46 ...59.95**

*The following Grad filters are available in densities 1 through 3:*

Grad Soft Tobacco  
Item # **LEGTO( )S46 ..59.95**

Grad Hard Sepia  
Item # **LEGS( )H46.....59.95**

Grad Hard Tobacco  
Item # **LEGTO( )H46 .59.95**

Grad Blender Sunset  
Item # **LEGSS( )46.....64.80**

Grad Soft Sepia  
Item # **LEGS( )S46.....59.95**

*To order Lee 4x6" Resin Graduated filters, just insert filter density into item number in blank space.*

### 4x6" Graduated Coral Filters

Graduated Coral filters are available in densities 1 through 7.

Grad Soft Edge Coral  
Item # **LEGC( )S46.....49.95**

Grad Hard Edge Coral  
Item # **LEGC( )H46.....49.95**

*To order Lee 4x6" Resin Graduated Coral filters, just insert filter density into item number in blank space.*

### 4x6" Graduated Neutral Density Filters

Graduated Neutral Density filters are available in 5 densities.

ND.3 1 Stop Darkest Area	ND.45 1½ Stops Darkest Area	ND.6 2 Stops Darkest Area	ND.75 2½ Stops Darkest Area	ND.9 3 Stops Darkest Area
Grad Soft Edge Neutral Density Item # <b>LEGND__S46 .....59.95</b>	Grad Hard Edge Neutral Density Item # <b>LEGND__H46 .....59.95</b>	Grad Blender Neutral Density Item # <b>LEGND__B46 .....59.95</b>		

*To order Lee 4x6" Resin Graduated Neutral density filters, just insert filter density into item number in blank space.*

## SPECIAL EFFECTS FILTERS

### 4x6" Miscellaneous Resin Color Grads

Grad Soft Edge Orange 2 <i>Item # LEGO2S46 .....49.95</i>	Grad Soft Edge Green 3 <i>Item # LEGGR346.....49.95</i>	Grad Blender Pink 1 <i>Item # LEGP1B46 .....49.95</i>
Grad Soft Edge Green <i>Item # LEGGRS46.....49.95</i>	Grad Soft Edge Pink 1 <i>Item # LEGP1S46.....49.95</i>	Grad Hard Edge Blue 5 <i>Item # LEGBL5H46 .....49.95</i>



RESIN FILTERS

### 4x6" Combination Graduated Filters

Combination graduated filters are manufactured 2 ways. A color warming filter combined with a graduated neutral density, and a graduated warming filter combined with a neutral density filter in

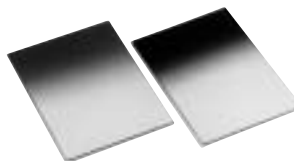
opposite direction into one filter. Both types of filters are used by photographers and videographers who prefer using less filters between the subject and the film. It also serves as a cost saver.

#### Type A (with) Filters

Grad 85 with .3ND <i>Item # LEG85ND.346 .....94.95</i>	Grad 85B with .6ND <i>Item # LEG85BND.646....94.95</i>
Grad 85 with .6ND <i>Item # LEG85ND.646 .....94.95</i>	Grad 85B with .9ND <i>Item # LEG85BND.946....94.95</i>
Grad 85 with .9ND <i>Item # LEG85ND.946 .....94.95</i>	Grad 81EF with .3ND <i>Item # LEG81EFND.34....94.95</i>
Grad 85 with .3ND Hard <i>Item # LEG85ND.3H46...94.95</i>	Grad 81EF with .6ND <i>Item # LEG81EFND.64....94.95</i>
Grad 85 with .9ND Hard <i>Item # LEG85ND.9H46...94.95</i>	Grad 81EF with .9ND <i>Item # LEG81EFND.94....94.95</i>
Grad 85B with .3ND <i>Item # LEG85BND.346 .....94.95</i>	

#### Type B (to) Filters

Grad 85 to .3ND <i>Item # LEG85ND.346Q...94.95</i>	Grad 85B to .3ND <i>Item # LEG85BND.34Q...94.95</i>
Grad 85 to .6ND <i>Item # LEG85ND.646Q...94.95</i>	Grad 85B to .6ND <i>Item # LEG85BND.64Q...94.95</i>
Grad 85 to .9ND <i>Item # LEG85ND.946Q...94.95</i>	Grad 85B to .9ND <i>Item # LEG85BND.94Q...94.95</i>
Grad 85 to .3ND Hard <i>Item # LEG85ND.3H4Q....94.95</i>	Grad 81EF to .3ND <i>Item # LEG81EFND.3Q...94.95</i>
	Grad 81EF to .6ND <i>Item # LEG81EFND.6Q...94.95</i>
	Grad 81EF to .9ND <i>Item # LEG81EFND.9Q...94.95</i>



### 4x6" Stripe Filters

Stripe filters are used to place a band of color or an effect across a specific area of a picture. For example, if a photographer would like to give a special effect to the horizon, these filters would be a great choice. Stripe filters are 4x6", which is larger than the regular 4x4" size. This allows the filters, when used with the Lee filter holder, to be moved to any point in the frame, giving the photographer the desired effect.

Sunset Stripe <i>Item # LESS46.....69.95</i>	Green Stripe <i>Item # LEGRS46.....69.95</i>
Red Stripe <i>Item # LERS46.....69.95</i>	Coral Stripe <i>Item # LECS46Z.....69.95</i>
Yellow Stripe <i>Item # LEYS46.....69.95</i>	Blue 3 Stripe <i>Item # LEBL3S46 .....69.95</i>
Magenta Stripe <i>Item # LEMS46Z.....69.95</i>	

### 4x4" Diffusion/Star/Contrast Resin Fog Filters

Lee fog filters create and enhance the effect of a natural fog. These fog filters have the ability to cause lights to flare and "mist" to appear where none previously existed, thereby enhancing the image. An even mist density is produced throughout the scene. They are available in several strengths.

Fog 1 <i>Item # LEF144.....49.95</i>	Fog 3 <i>Item # LEF344.....49.95</i>
Fog 2 <i>Item # LEF244.....49.95</i>	Fog 5 <i>Item # LEF544.....49.95</i>



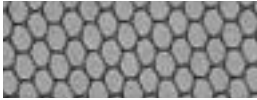
Taken with a Fog 5 filter

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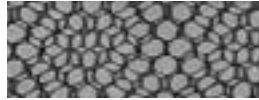
### 4x4" Net Filters

Black net creates a soft diffusion effect, while causing no halation from highlights. Dark areas remain dark. White net creates a soft diffusion effect, while adding a misty look. Producing halation from highlights, dark areas appear less dense. Flash net creates a soft diffusion effect, while enhancing flesh tones.

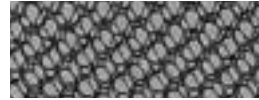
Black Net 1



Black Net 2



Black Net 3



Black Net 1 Item # <i>LEBN144</i> ..... <b>49.95</b>	White Net 1 Item # <i>LEWN144</i> .... <b>49.95</b>
Black Net 2 Item # <i>LEBN244</i> ..... <b>49.95</b>	White Net 2 Item # <i>LEWN244</i> .... <b>49.95</b>
Black Net 3 Item # <i>LEBN344</i> ..... <b>49.95</b>	White Net 3 Item # <i>LEWN344</i> .... <b>49.95</b>
Flesh Net Item # <i>LEFN44</i> ..... <b>49.95</b>	

### 4x4" Mist Filters

Used to create a dreamlike soft-focus effect, this filter will remove the harsh edge off sharpness, introduce a small amount of flare and produce a mild reduction in contrast. Being 4x6" (larger size), these filters can be moved to any point in the frame to give the desired effect, when used with the Lee filter holder.

Graduated Mist Item # <i>LEGM46</i> ..... <b>49.95</b>	Clear Spot Mist Item # <i>LEMCS46</i> ..... <b>49.95</b>
Stripe Mist Item # <i>LEMS46Q</i> ..... <b>49.95</b>	Mist Set (All 3 Mist Filters) Item # <i>LEMS46</i> ..... <b>108.00</b>

### Clear Filters/Polarizer Filters

Create your own effects. Drill, smear with resins, oils, adhesives or just about any substance of your choice to create your own, unique effect. Available in standard and graduate sizes - the latter being suitable for the production of adjustable zones.

4x4" Clear Filter Item # <i>LEC44</i> ..... <b>49.95</b>	4x6" Clear Filter Item # <i>LEC46</i> ..... <b>49.95</b>
Polarizer Filter 4x4" Polyester. Item # <i>LEP44</i> ..... <b>159.95</b>	

### 4x6" Star Graduated Filters

Star graduated filters produce a star effect from many different light sources. They come segmented, standard grad or spot. Being 4x6" (larger size), these filters can be moved to any point in the frame to give the desired effect, when used with the Lee filter holder.

Star Segment Item # <i>LESS46Z</i> ..... <b>44.80</b>	Selective Star Set Consists of all 3 4x6" Resin Star Graduated filters. Item # <i>LESS46Q</i> ..... <b>108.00</b>
Star Grad Item # <i>LEGS46</i> ..... <b>44.80</b>	
Star Spot Item # <i>LESS46Y</i> ..... <b>44.80</b>	

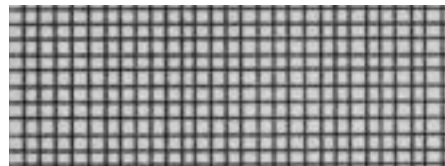
### 4x4" Low Contrast Filters

Low contrast causes light to spread from highlight areas to the shadow areas. Lowers contrast and mutes colors. White areas remain, while blacks become lighter. Allows more detail in dense shadow areas. Available in 5 densities.

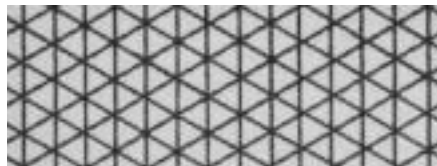
Low Contrast 1/4 Item # <i>LELC.2544</i> ..... <b>49.95</b>	Low Contrast 1 Item # <i>LELC144</i> ..... <b>49.95</b>
Low Contrast 1/2 Item # <i>LELC.544</i> ..... <b>49.95</b>	Low Contrast 1 1/4 Item # <i>LELC1.2544</i> ..... <b>49.95</b>
Low Contrast 3/4 Item # <i>LELC.7544</i> ..... <b>49.95</b>	

### 4x4" Star Filters

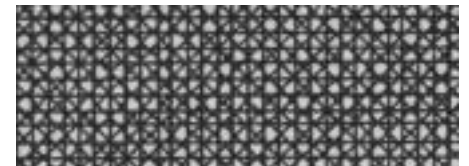
Star filters produce a star effect from many different light sources. Available in 4, 6 or 8 point stars.



4 Point Star 1/2mm



6 Point Star 1/2mm



8 Point Star 1/2mm

4 Point Star 1/4mm Item # <i>LES4P.544</i> ..... <b>49.95</b>	6 Point Star 1/4mm Item # <i>LES6P.544</i> ..... <b>49.95</b>	8 Point Star 1/4mm Item # <i>LES8P.544</i> ..... <b>49.95</b>
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### LEE FILTERS

#### 4x6" Resin Filter Sets

The following introductory filter sets contain three of each of the most popular filters. These filters are an important asset to photographers and videographers, as they add extra special effects or emphasize particular elements in a composition. These filters in the larger 4x6" size, if used with the Lee filter holder, can be moved to any point in the frame to give the desired effect.

#### Sky Set (SK-SET)

Consists of graduated sunset 2, coral stripe and graduated Sky Blue 3.

**Item # LESS46 .....108.00**

#### Mist Set (M-SET)

Consists of graduated mist, stripe mist and clear Spot mist.

**Item # LEMS46 .....108.00**

#### Color Set (CG-SET)

Consists of graduated cyan, graduated yellow and graduated magenta.

**Item # LECS46 .....108.00**

#### Star Set (ST-SET)

Consists of star graduated, star spot and star segment.

**Item # LESS46Q .....108.00**

#### Pop Set (POP-SET)

Consists of pop blue, pop red, and pop green.

**Item # LEPS46 .....109.50**

#### Autumn Set (AU-SET)

Consists of graduated tobacco 2, graduated chocolate 2 and graduated coral 6 warming filters.

**Item # LEAS46 .....108.00**

#### Stripe Set (STR-SET)

Consists of cyan, pink and yellow stripes.

**Item # LESS46J .....108.95**

#### Pale Tint Set (PT-SET)

Consists of pink 1, cyan 1, and green 1.

**Item # LEPTS46 .....108.00**

#### Net Set (NET-SET)

Consists of black net, double black white net and flash net.

**Item # LENS46 .....108.00**

#### NDG Set (NDG-SET)

Consists of neutral density grad 0.3, 0.6 and 0.9.

**Item # LENDS46 .....172.50**

#### Coral Set (CO-SET)

Consists of graduated coral 2, graduated coral 4 and graduated 6.

**Item # LECS46Q .....108.00**

#### Sky Blue Set (SB-SET)

Consists of graduated sky blue 1, graduated sky blue 2 and graduated sky blue 3.

**Item # LESBS46 .....108.00**

#### Miscellaneous Filters

#### 4x4" Resin Sepia 1 (1 Stop)

**Item # LES144 .....59.95**

#### 4x4" Resin Sepia 2 (2 Stops)

**Item # LES244 .....59.95**

#### 4x4" Resin Sepia 3 (3 Stops)

**Item # LES344 .....59.95**

#### 4x4" Resin Antique Suede 1

**Item # LEAS144 .....59.95**

#### 4x4" Resin Antique Suede 2

**Item # LEAS244 .....59.95**

#### 4x4" Resin Antique Suede 3

**Item # LEAS344 .....59.95**

#### 4x4" Resin Antique Suede 4

**Item # LEAS444 .....59.95**

### LINDAHL 3" EFX FILTERS

Lindahl offers a quality line of Ultra Effects (EFX) Filters. A durable alternative to gels, these filters are made in the U.S. of a high-quality, resilient CR39 optical resin material. This synthetic resin is dyed in the mass and rigorously tested by computer-controlled machinery. These 3" filters fit in the rear slot of the shade. Each filter is protected with a custom filter rim. The rim is 1/4" thick with a retrievable handle. The rim not only protects the filter, but makes it quick and easy to insert and remove. Pick a filter for beautiful scenics, breathtaking brides, professional looking portraits and more!

#### COLOR CORRECTION FILTERS

FILTER	MFG #	ITEM #	B&H PRICE	FILTER	MFG #	ITEM #	B&H PRICE
025 MAGENTA	23.3301	LICC025M33	27.50	025 GREEN	23.3331	LICC025G33	27.50
050MAGENTA	23.3302	LICC05M33	27.50	050 GREEN	23.3332	LICC05G33	27.50
075 MAGENTA	23.3303	LICC075M33	27.50	075 GREEN	23.3333	LICC075G33	27.50
10 MAGENTA	23.3304	LICC10M33	27.50	10 GREEN	23.3334	LICC10G33	27.50
20 MAGENTA	23.3305	LICC20M33	27.50	20 GREEN	23.3335	LICC20G33	27.50
30 MAGENTA	23.3306	LICC30M33	27.50	30 GREEN	23.3336	LICC30G33	27.50
40 MAGENTA	23.3307	LICC40M33	27.50	40 GREEN	23.3337	LICC40G33	27.50
50 MAGENTA	23.3308	LICC50M33	27.50	50 GREEN	23.3338	LICC50G33	27.50
025 BLUE	23.3311	LICC025B33	27.50	025 YELLOW	23.3341	LICC025Y33	27.50
050 BLUE	23.3312	LICC05B33	27.50	050 YELLOW	23.3342	LICC05Y33	27.50
075 BLUE	23.3313	LICC075B33	27.50	075 YELLOW	23.3343	LICC075Y33	27.50
10 BLUE	23.3314	LICC10B33	27.50	10 YELLOW	23.3344	LICC10Y33	27.50
20 BLUE	23.3315	LICC20B33	27.50	20 YELLOW	23.3345	LICC20Y33	27.50
30 BLUE	23.3316	LICC30B33	27.50	30 YELLOW	23.3346	LICC30Y33	27.50
40 BLUE	23.3317	LICC40B33	27.50	40 YELLOW	23.3347	LICC40Y33	27.50
50 BLUE	23.3318	LICC50B33	27.50	50 YELLOW	23.3348	LICC50Y33	27.50
025 CYAN	23.3321	LICC025C33	27.50	025 RED	23.3351	LICC025R33	27.50
050 CYAN	23.3322	LICC05C33	27.50	050 RED	23.3352	LICC05R33	27.50
075 CYAN	23.3323	LICC075C33	27.50	075 RED	23.3353	LICC075R33	27.50
10 CYAN	23.3324	LICC10C33	27.50	10 RED	23.3354	LICC10R33	27.50
20 CYAN	23.3325	LICC20C33	27.50	20 RED	23.3355	LICC20R33	27.50
30 CYAN	23.3326	LICC30C33	27.50	30 RED	23.3356	LICC30R33	27.50
40 CYAN	23.3327	LICC40C33	27.50	40 RED	23.3357	LICC40R33	27.50
50 CYAN	23.3328	LICC50C33	27.50	50 RED	23.3358	LICC50R33	27.50

### SPECIAL EFFECT FILTERS

Description	Application	Filter	Mfg #	Item #	B&H Price
<b>Cross Star</b>	Creates "stars" of light (4 or 6 point) without degrading the overall image. Moderate apertures (f4-f8) are suggested.	4- Point Cross Star	23-3101	LIS4P33	27.50
		6 - Point Cross Star	23-3102	LIS6P33	-
<b>Color Star</b>	Shoots many multi-colored rays from each pin-point light source.	Color Star	23-3171	LICS33	37.95
<b>Color Streak/Repeater</b>	Sends a brilliant colorful spear of light from each point source.	Color Streak/Repeater	23-3172	LICSR33	37.95
<b>Color Wheel 32</b>	Makes colored circles around a specular highlight with 32 rays radiating around each light source.	Color Wheel 32	23-3173	LICW3233	37.95
<b>Soft EFX Swirl</b>	Adds a whirling trail that surrounds the sharp subject. Lines convey an image of rapid rotation.	Soft EFX Swirl	23-3176	LIVSUEFX	28.50
<b>Central Sharp Diffusers</b>	Sets apart the central image from the remainder of the photograph and adds general mood to the full image. The center remains sharp while the background is diffused in either neutral, white or dark tones.	Center Sharp Diffuser-Natural	23-3121	LICSDN33	27.50
		Center Sharp Diffuser-Hi-Key	23-3122	LICSDHK33	27.50
		Center Sharp Diffuser-Low-Key	23-3123	LICSDLK33	27.50
<b>Diffusers</b>	Softens your image to produce a subtle, glamorous effect. (Glass). Combines softening with warming, all in one filter. The warming effect produces a flattering healthy skin tone. The diffusion produces a pronounced soft look.	Soft Touch Diffusion	23-8201	LISTD33	58.50
		Warm Touch Diffusion #1	23-3001	LIWTD1UEFX	45.00
		Warm Touch Diffusion #2	23-3002	LIWTD2UEFX	45.00
<b>Soft Ring Diffusers</b>	Concentric ring design provides circular disruption for a subtle diffusion that retains contrast, even as the diffusion increases. Ring #1 is ideal for cutting sharpness and smoothing skin tones. #2 and #3 are just a little bit heavier. (Glass)	Soft Ring Diffusion #1	23-8001	LISD133	73.95
		Soft Ring Diffusion #2	23-8002	LISD233	73.95
		Soft Ring Diffusion #3	23-6003	LISD333	58.00
		Soft Ring Diffusion Set #1-3	23-6000	LISDS33	120.00
<b>Mist</b>	Gently colors and diffuses the entire image to achieve a dream-like quality. Great for an unusual special effect.	Rose Mist	23-3141	LIRM33	27.50
		Ice Blue Mist	23-3142	LIIBM33	27.50
		Lemon Yellow Mist	23-3143	LILYM33	27.50
<b>Fog</b>	Creates misty illusions and achieves a soft, whitish cast of mist over the entire image. (#1 least effect, #3 strongest effect)	Fog 1	23-3144	LIF133	27.50
		Fog 2	23-3145	LIF233	27.50
		Fog 3	23-3146	LIF333	27.50
<b>Color Enhancer</b>	Creates a more interesting photograph when light is dull. Warm a cold mood.	Color Enhancer	23-3154	LICE33	27.50
<b>Sepia</b>	Adds a beautiful "antique" quality to portraits.	Sepia	23-3155	LIS33	27.50
<b>Fluorescent</b>	Eliminates the blue-green cast found when shooting daylight color films with fluorescent lighting.	Fluorescent	23-3151	LIFLD33	27.50
<b>Skylight</b>	Helps reduce the excess blue often found in outdoor scenes.	Sky	23-3152	LISL33	27.50
<b>UV Haze</b>	Reduces ultraviolet light and haze to improve image sharpness.	UV	23-3153	LIUV33	27.50
<b>Green #11</b>	Darkens skies, improves skin tones, great for outdoor portraits.	Green	23-3191	LIGR33	27.50
<b>Red #25</b>	Cuts haze, gives the most dramatic rendering of skies, can produce an infrared effect.	Red	23-3192	LIR33	27.50
<b>Orange #15</b>	Greatly improves contrast and darkens skies, enhances wood tones and fades skin tones.	Orange	23-3193	LI033	27.50
<b>Yellow #8</b>	Most accurate rendering of sky, clouds and foliage in black & white photography.	Yellow	23-3194	LIY33	27.50

### COLOR TEMPERATURE CORRECTION FILTERS

Description	Conversion K°	Filter	MFG #	Item #	Price
Color Conversion Blue (Cool)	3400°-5500°	80A	23-3228	LI80A33	27.50
	3400°-5500°	80B	23-3227	LI80B33	27.50
	3800°-5500°	80C	23-3226	LI80C33	27.50
	4200°-5500°	80D	23-3225	LI80D33	27.50
Light Balancing Yellowish (Warm)	3300°-3200°	81	23-3211	LI8133	27.50
	3400°-3200°	81A	23-3212	LI81A33	27.50
	3500°-3200°	81B	23-3213	LI81B33	27.50
	3600°-3200°	81C	23-3214	LI81C33	27.50
	3700°-3200°	81D	23-3215	LI81D33	27.50
	3850°-3200°	81EF	23-3216	LI81EF33	27.50
Light Balancing Bluish (Cool)	3100°-3200°	82	23-3221	LI8233	27.50
	3000°-3200°	82A	23-3222	LI82A33	27.50
	2900°-3200°	82B	23-3223	LI82B33	27.50
	2800°-3200°	82C	23-3224	LI82C33	27.50
Color Conversion Amber (Warm)	5500°-3400°	85	23-3218	LI8533	27.50
	5500°-3400°	85A	23-3219	LI85A33	27.50
	5500°-3200°	85B	23-3220	LI85B33	27.50
	5500°-3800°	85C	23-3217	LI85C33	27.50

### Harrison and Harrison

Harrison & Harrison filters are glass sandwich filters. This gives the filter two plain surfaces with the optical effect in the center. Harrison filters are available in 3" style, mounted in Lindahl plastic holders.



- #1 Diffusion Effect Filter (19-5001)**  
Item # **LIHHD1** ..... **73.95**
- #2 Diffusion Effect Filter (19-5002)**  
Item # **LIHHD2** ..... **73.95**
- #3 Diffusion Effect Filter (19-5003)**  
Item # **LIHHD3** ..... **73.95**

- #4 Diffusion Effect Filter (19-5004)**  
Item # **LIHHD4** ..... **73.95**
- #5 Diffusion Effect Filter (19-5005)**  
Item # **LIHHD5** ..... **73.95**



# KODAK / LEE / OPTIFLEX

## FILTERS

### Description Information About Gel and Flexible Filters

Most Kodak filters are made by dissolving suitable organic dyes in liquid gelatin and coating the proper amount of the solution onto prepared glass. After the coating is dry, the gelatin film is stripped from the support material and coated with lacquer. Different dyes and manufacturing techniques, however, are employed in the preparation of cellulose acetate filters. Each filter, either gelatin or acetate, is standardized for spectral transmittance and total transmittance by special instruments which apply an optical form of limit gauge to these characteristics.

Lee polyester, Optiflex and Lindahl resin filters are manufactured with a similar process of dyeing filters in a liquid state.

Like other dyes, the dyes used in filters may, in time, change under certain conditions of heat and light.

The most complete line of filters for photographic uses is available in the form of gelatin or polyester films. Prepared in the manner described above, these filters have a thickness of 0.1mm, plus or minus 0.01mm. Because of their uniform thickness, they have excellent optical quality and are suitable for precise work in which little effect on definition and no increase in length of the

optical path can be tolerated. They are supplied as films in 75mm, 100mm and 150mm squares, and 350 x 450mm rectangles.

Optical Resin Filters are made of a rigid C-39 resin material, more durable than gel and polyester and can be cleaned too. Filter Frame provide a convenient way to hold and protect gelatin filters. If you are using the filter with a camera or enlarger lens, we recommend a Gelatin Filter Frame Holder or similar filter holder which can be inserted into a cardboard or plastic frame, which allows the gelatin or polyester filter to be used in all major filter holders, such as Hitech, Lee, Sinar and Cokin P. This holder attaches to the lens by an adapter ring of appropriate size (and step-up ring, if required.)

Kodak gelatin, Lee polyester and Optiflex resin filters come in the following sizes:

GELATIN FILTER SIZES

U.S. SIZE	METRIC	CODE	U.S. SIZE	METRIC	CODE
3 x 3"	75 x 75mm	33	6 x 6"	150 x 150mm	66
4 x 4"	100 x 100mm	44	14 x 18"	350 x 450mm	1418

### Neutral Density Filters

Visually neutral filters, with some slight blue absorption, these filters are used in black-and-white and color photography to reduce light intensity by a definite ratio without affecting the basic tonal rendition in the original scene. Densities are positive.

PRICES AND SPECIFICATIONS for NEUTRAL DENSITY FILTERS

N.D. FILTER	% TRANSMIT	FILT FACTOR	I.E. (F-STOPS)	KODAK				LEE		OPTIFLEX		ITEM #
				3x3"	4x4"	6x6"	14x18"	3x3"	4x4"	3x3"	4x4"	
				CODE # KO( )33	CODE # KO( )44	CODE # KO( )66	CODE # KO( )1418	CODE # LE( )33	CODE # LE( )44Q	CODE # OP( )33	CODE # OP( )44	
0.1	80	1.25	½	19.95	34.95	91.95	484.50	14.40	29.60	14.95	29.95	ND.1
0.2	63	1.5	¾	19.95	34.95	91.95	484.50	14.40	29.60	14.95	29.95	ND.2
0.3	50	2	1	19.95	34.95	91.95	484.50	14.40	29.60	14.95	29.95	ND.3
0.4	40	2.5	1½	19.95	34.95	91.95	484.50	14.40	29.60	—	—	ND.4
0.5	32	3	1¾	19.95	34.95	91.95	484.50	14.40	29.60	—	—	ND.5
0.6	25	4	2	19.95	34.95	91.95	484.50	14.40	29.60	14.95	29.95	ND.6
0.7	20	5	2½	19.95	34.95	91.95	484.50	14.40	29.60	—	—	ND.7
0.8	16	6	2¾	19.95	34.95	91.95	484.50	14.40	29.60	—	—	ND.8
0.9	13	8	3	19.95	34.95	91.95	484.50	14.40	29.60	14.95	29.95	ND.9
1.0	10	10	3¾	19.95	34.95	91.95	484.50	—	—	—	—	ND1.0
2.0	1	100	6¾	19.95	34.95	91.95	484.50	—	—	—	—	ND2.0
3.0	0.1	1,000	10	19.95	34.95	91.95	484.50	—	—	—	—	ND3.0
4.0	0.01	10,000	13¾	19.95	34.95	91.95	484.50	—	—	—	—	ND4.0

To order Neutral Density Filters, insert item # into the parenthesis in the middle of the code #.

FLEXIBLE FILTERS

395



THE PROFESSIONAL'S SOURCE (212) 444-6630 • FAX: (212) 239-7770

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# KODAK/LEE/OPTIFLEX

## CONVERSION AND LIGHT BALANCING FILTERS

FLEXIBLE FILTERS

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### Conversion Filters for Color Film

These filters are intended for use whenever significant changes in the color temperature of the illumination are required (e.g., daylight to artificial light). The filter may be positioned between the light source and other elements of the system, or over the camera lens in conventional photographic recording.

### Light Balancing Filters

Light-balancing filters enable the photographer to make minor adjustments in the color quality of illumination to obtain cooler (bluer) or warmer (yellow) color rendering. When using a color-temperature meter to determine the color temperature of prevailing light, or where you know the color temperature, use the following table to convert the prevailing temperature to 3200K.

### PRICES AND SPECIFICATIONS FOR CONVERSION and LIGHT BALANCING FILTERS

FILTER COLOR	WRATTEN NUMBER	CONV. K°	BAL	E.I. (F-STOPS)	KODAK				LEE		OPTIFLEX		ITEM #
					3x3"	4x4"	6x6"	14x18"	3x3"	4x4"	3x3"	4x4"	
					CODE # KO( )33	CODE # KO( )44	CODE # KO( )66	CODE # KO( )1418	CODE # LE( )33	CODE # LE( )44Q	CODE # OP( )33	CODE # OP( )44	
Color Conversion Blue (Cool)	80A	3200°-5500°	+2300K	2	10.90	16.95	44.95	-	8.80	13.60	7.95	15.95	80A
	80B	3400°-5500°	+2100K	1½	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	80B
	80C	3800°-5500°	+1700K	1	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	80C
	80D	4200°-5500°	+1300K	½	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	80D
Light Balancing Yellowish (Warm)	81	3300°-3200°	-100K	½	10.90	16.95	44.95	-	8.80	13.60	7.95	15.95	81
	81A	3400°-3200°	-200K	½	10.90	16.95	44.95	-	8.80	13.60	7.95	15.95	81A
	81B	3500°-3200°	-300K	½	10.90	16.95	44.95	-	8.80	13.60	7.95	15.95	81B
	81C	3600°-3200°	-400K	½	10.90	16.95	44.95	-	8.80	13.60	7.95	15.95	81C
	81D	3700°-3200°	-500K	¾	10.90	16.95	44.95	-	8.80	13.60	7.95	15.95	81D
	81EF	3850°-3200°	-650K	¾	10.90	16.95	44.95	-	8.80	13.60	7.95	15.95	81EF
Light Balancing Bluish (Cool)	82	3100°-3200°	+100K	½	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	82
	82A	3000°-3200°	+200K	½	10.90	16.95	44.95	-	8.80	13.60	7.95	15.95	82A
	82B	2900°-3200°	+300K	¾	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	82B
	82C	2800°-3200°	+400K	¾	10.90	16.95	44.95	-	8.80	13.60	7.95	15.95	82C
Color Conversion Amber (Warm)	85	5500°-3400°	-2100K	¾	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	85
	85B	5500°-3200°	-2300K	¾	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	85B
	85C	5500°-3800°	-1700K	½	10.90	16.95	44.95	-	8.80	13.60	7.95	15.95	85C

*To order Conversion and Light Balancing Filters, insert item # into the parenthesis in the middle of the code #.*

### ADDITIONAL SPECIFICATIONS ON CONVERSION FILTERS

WRATTEN #	CONVERSION K°	E.I. (F-STOPS)	WRATTEN #	CONVERSION K°	E.I. (F-STOPS)
81	3510°-3400°	½	82C	2950°-3400°	¾
81A	3630°-3400°	½	82C + 82C	2490°-3200°	1½
81B	3740°-3400°	½	82C + 82C	2610°-3400°	1½
81C	3850°-3400°	½	82C + 82B	2570°-3200°	1½
81D	3970°-3400°	½	82C + 82B	2700°-3400°	1½
81EF	4140°-3400°	¾	82C + 82A	2650°-3200°	1
82	3290°-3400°	½	82C + 82A	2780°-3400°	1
82A	3180°-3400°	½	82C + 82	2720°-3200°	1
82B	3060°-3400°	¾	82C + 82	2870°-3400°	1

**Overnight Shipping Available**

# KODAK / LEE / OPTIFLEX

## FILTERS

### PRICES FOR COMBINATION NEUTRAL DENSITY WITH CONVERSION and LIGHT BALANCING FILTERS

FILTER COLORS	KODAK				KODAK ITEM #	LEE		LEE ITEM #
	3x3"	4x4"	6x6"	14x18"		3x3"	4x4"	
	CODE # KO( )33	CODE # KO( )44	CODE # KO( )66	CODE # KO( )1418		CODE # LE( )33	CODE # LE( )44Q	
81EF + ND.3	-	-	-	-	-	14.40	29.60	81EFND.3
81EF + ND.6	-	-	-	-	-	14.40	29.60	81EFND.6
81EF + ND.9	-	-	-	-	-	14.40	29.60	81EFND.9
85 + ND.3	10.90	16.95	44.95	242.95	85N3	14.40	29.60	85ND.3
85 + ND.6	10.90	16.95	44.95	-	85N6	14.40	29.60	85ND.6
85 + ND.9	10.90	16.95	44.95	-	85N9	14.40	29.60	85ND.9
85B + ND.3	10.90	-	-	-	85BN3	14.40	29.60	85BND.3
85B + ND.6	-	-	-	-	-	14.40	29.60	85BND.6
85B + ND.9	-	-	-	-	-	14.40	29.60	85BND.9

To order Combination Filters, insert item # into the parenthesis in the middle of the code #.

### Color Compensating Filters

Color compensating filters control by attenuating principally the red, blue or green part of the spectrum. While controlling one color, the filter transmits one or both of the other two colors. Thus, color com-

pensating filters can make changes in the color balance of pictures recorded on color films, or compensate for deficiencies in the spectral quality of a light source.

### PRICES for COLOR COMPENSATING FILTERS

FILTER	KODAK				LEE		OPTIFLEX		ITEM #
	3x3"	4x4"	6x6"	14x18"	3x3"	4x4"	3x3"	4x4"	
	CODE # KO( )33	CODE # KO( )44	CODE # KO( )66	CODE # KO( )1418	CODE # LE( )33	CODE # LE( )44Q	CODE # OP( )33	CODE # OP( )44	
Blue CC025B	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC025B
Blue CC075B	9.95	-	-	-	-	-	-	-	CC075B
Blue CC05B	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC05B
Blue CC10B	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC10B
Blue CC15B	-	-	-	-	8.80	13.60	7.95	15.95	CC15B
Blue CC20B	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC20B
Blue CC025B	-	-	-	-	8.80	13.60	7.95	15.95	CC025B
Blue CC30B	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC30B
Blue CC40B	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC40B
Blue CC50B	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC50B
Cyan CC025C	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC025C
Cyan CC075C	10.90	-	-	-	-	-	-	-	CC075C
Cyan CC05C	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC05C
Cyan CC10C	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC10C
Cyan CC15C	-	-	-	-	8.80	13.60	7.95	15.95	CC15C
Cyan CC20C	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC20C
Cyan CC25C	-	-	-	-	8.80	13.60	-	-	CC25C
Cyan CC30C	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC30C
Cyan CC40C	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC40C
Cyan CC50C	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC50C

continued

FLEXIBLE FILTERS

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# KODAK/LEE/OPTIFLEX

## F I L T E R S

FLEXIBLE FILTERS

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### PRICES for COLOR COMPENSATING FILTERS, *continued*

FILTER	KODAK				LEE		OPTIFLEX		ITEM #
	3x3"	4x4"	6x6"	14x18"	3x3"	4x4"	3x3"	4x4"	
	CODE # KO( )33	CODE # KO( )44	CODE # KO( )66	CODE # KO( )1418	CODE # LE( )33	CODE # LE( )44Q	CODE # OP( )33	CODE # OP( )44	
Green CC075G	9.95	-	-	-	-	-	-	-	CC075G
Green CC025G	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC025G
Green CC05G	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC05G
Green CC10G	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC10G
Green CC15G	-	-	-	-	8.80	13.60	-	-	CC15G
Green CC20G	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC20G
Green CC25G	-	-	-	-	8.80	13.60	-	-	CC25G
Green CC30G	10.90	16.95	44.95	-	8.80	13.60	7.95	15.95	CC30G
Green CC40G	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC40G
Green CC50G	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC50G
Magenta CC075M	9.95	-	-	-	-	-	-	-	CC075M
Magenta CC025M	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC025M
Magenta CC05M	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC05M
Magenta CC10M	10.90	16.95	44.95	229.95	8.80	13.60	7.95	15.95	CC10M
Magenta CC15M	-	-	-	-	8.80	13.60	7.95	15.95	CC15M
Magenta CC20M	10.90	16.95	44.95	229.95	8.80	13.60	7.95	15.95	CC20M
Magenta CC25M	-	-	-	-	8.80	13.60	-	-	CC25M
Magenta CC30M	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC30M
Magenta CC40M	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC40M
Magenta CC50M	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC50M
Red CC075R	9.95	-	-	-	-	-	-	-	CC075R
Red CC025R	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC025R
Red CC05R	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC05R
Red CC10R	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC10R
Red CC15R	-	-	-	-	8.80	13.60	7.95	15.95	CC15R
Red CC20R	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC20R
Red CC25R	-	-	-	-	8.80	13.60	-	-	CC25R
Red CC30R	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC30R
Red CC40R	10.90	16.95	44.95	-	8.80	13.60	7.95	15.95	CC40R
Red CC50R	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC50R
Yellow CC025Y	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC025Y
Yellow CC05Y	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC05Y
Yellow CC10Y	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC10Y
Yellow CC15Y	-	-	-	-	8.80	13.60	7.95	15.95	CC15Y
Yellow CC20Y	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC20Y
Yellow CC25Y	-	-	-	-	8.80	13.60	-	-	CC25Y
Yellow CC30Y	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC30Y
Yellow CC40Y	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC40Y
Yellow CC50Y	10.90	16.95	44.95	242.95	8.80	13.60	7.95	15.95	CC50Y

*To order Color Compensating Filters, insert item # into the parenthesis in the middle of the code #.*

**We Ship Worldwide**

### Fluorescent Correction Filters

This system offers filter solutions to many fluorescent correction problems. Both color temperature conversion and green absorption functions are combined into one filter: the filter used depends on tube and film type. In mixed lighting conditions, tests using a color meter are recommended.

#### LEE FLUORESCENT CORRECTION FILTERS

FILTER TYPE	FILTER	APPROXIMATE EXPOSURE INCREASE	CONVERTING	LEE 3x3"	LEE 4x4"	ITEM #
				CODE # LE( )33	CODE # LE( )44Q	
Tungsten (3200)	FL 57B	1½ Stops	5700K to Tungsten	8.80	13.60	FLB5700
	FL 43B	1 Stop	4300K to Tungsten	8.80	13.60	FLB4300
	FL 36B	¾ Stop	3600K to Tungsten	8.80	13.60	FLB3600
Daylight (5500K)	FL 57D	¾ Stop	5700K to Daylight	8.80	13.60	FLD5700
	FL 43D	1 Stop	4300K to Daylight	8.80	13.60	FLD4300
	FL 36D	1½ Stops	3600K to Daylight	8.80	13.60	FLD3600

*To order Fluorescent Correction Filters, insert item # into the parenthesis in the middle of the code #.*

### Lee ARC Correction Filters (CT)

Similar to the Fluorescent Correction range, these filters offer a single filter correction from mercury vapor and high pressure sodium lighting to daylight or tungsten film.

#### PRICES AND SPECIFICATIONS FOR ARC CORRECTION FILTERS (CT)

FILTER TYPE	FILTER	APPROXIMATE EXPOSURE INCREASE	CONVERTING	LEE 3x3"	LEE 4x4"	ITEM #
				CODE # LE( )33	CODE # LE( )44Q	
Tungsten (3200K)	HPS-T	2 Stops	Hi-Pressure Sodium	8.80	13.60	HPST
	MV-T	2 Stops	Mercury Vapor	8.80	13.60	MVT
Daylight (5500K)	HPS-D	3 Stops	Hi-Pressure Sodium	8.80	13.60	HPSD
	MV-D	2½ Stops	Mercury Vapor	8.80	13.60	MVD

*To order ARC Correction Filters, insert item # into the parenthesis in the middle of the code #.*

### 4x4" Lee Polyester Filter Sets

The following 4x4" polyester filter sets are enclosed in a cardboard frame and can be used with most popular 4x4" (125mm) holders.

#### Soft Set (SFT-Set)

Consists of five soft focus filters in a cardboard frame.

**Item # LESSZ.....48.00**

#### CT Set (CT-Set)

Consists of four of the most common color correction filters which give basic color temperature adjustment. 80A, 80C, 85B and 85C.

**Item # LECTS .....48.00**

#### Fine CT Set (FCT-Set)

Consists of four filters which give color temperature control in small increments. 82C, 82A, 81D and 81A.

**Item # LEFCTS.....48.00**

#### D FL Set (DFL-Set)

Consists of three daylight fluorescent correction filters for the lens and a selection of lighting filters for the flash.

**Item # LEDFS .....48.00**

#### T FL Set (TFL-Set)

Consists of three tungsten fluorescent correction filters for the lens and a selection of lighting filters for the flash.

**Item # LETFS.....48.00**

#### Black & White (BW-Set)

Consists of 4 filters for black-and-white photography. Yellow #8, Yellow-Green #11, Orange #21 and Light Red #23A.

**Item # LEBWS .....48.00**

#### Magenta Set (MAG-Set)

Consists of four magenta filters in a cardboard frame for color balancing. CC05M, CC10M, CC20M and CC30M.

**Item # LEMS.....48.00**

#### ND Set (ND-Set)

Consists of three reducing light levels. ND 0.3 (1-stop), ND 0.6 (2-stops) and ND 0.9 (3-stops).

**Item # LENDS.....48.00**



# KODAK / LEE

## FILTERS

FLEXIBLE FILTERS

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### Color Filters for B&W

#### COLOR FILTERS for B&W

FILTER	DESCRIPTION AND SOME OF ITS USES	KODAK				LEE		ITEM #
		3x3"	4x4"	6x6"	14x18"	3x3"	4x4"	
		CODE # KO( )33	CODE # KO( )44	CODE # KO( )66	CODE # KO( )1418	CODE # LE( )33	CODE # LE( )44Q	
3	Light yellow. Removes some excess blue in aerial photos.	24.95	39.95	109.95	579.95	8.80	13.60	3
8	Yellow.	10.90	16.95	44.95	242.95	8.80	13.60	8
9	Deep yellow. More dramatic effect than No. 8.	24.95	39.95	109.95	-	-	-	9
11	Yellowish Green. Corrects panchromatic film to tungsten eye response.	10.90	16.95	44.95	242.95	8.80	13.60	11
12	Deep yellow. Minus-blue filter (see #32 for minus-green and #44A for minus-red).	10.90	16.95	44.95	242.95	8.80	13.60	12
15	Deep yellow. Darkens sky in landscape photography.	10.90	16.95	44.95	242.95	8.80	13.60	15
16	Yellow-orange. Permits greater overcorrection of sky than #15.	10.90	16.95	44.95	242.95	8.80	13.60	16
21	Orange. Contrast filter used for blue and blue-green absorption.	24.95	39.95	109.95	579.95	8.80	13.60	21
22	Deep orange. Contrast filter, greater green absorption than #21.	10.90	16.95	44.95	242.95	-	-	22
23A	Light red. Contrast filter. Ideal for shooting objects or architecture.	-	-	-	-	8.80	13.60	23A
25	Red tricolor. Used for color separation work, tricolor printing and infrared photography.	10.90	16.95	44.95	229.95	12.00	24.95	25
26	Red. For 3-D anaglyph viewing with a #55 filter (green).	24.95	39.95	109.95	579.95	-	-	26
29	Deep red tricolor. Used with #'s 47 and 61 for separation and tricolor printing work.	10.90	16.95	44.95	242.95	-	-	29
32	Magenta. Minus-green (#12 is minus-blue, #44A is minus-red).	24.95	39.95	109.95	579.95	-	-	32
34A	Violet. For minus-green and plus-blue separation.	24.95	39.95	109.95	579.95	-	-	34
38A	Blue. Absorbs red, some UV and green light.	24.95	39.95	109.95	579.95	-	-	38A
44	Light blue-green. Minus-red filter with much UV absorption.	24.95	39.95	109.95	579.95	-	-	44
44A	Light blue-green. Minus-red (#12 is minus-blue, and #32 is minus-green).	24.95	39.95	109.95	579.95	-	-	44A
47	Blue tricolor. Used with #'s 29 and 61 for color separation work.	10.90	16.95	44.95	242.95	-	-	47
47A	Light blue. Used for exciting fluorescent dye in medical applications.	24.95	39.95	109.95	579.95	-	-	47A
47B	Deep blue tricolor. Used for color separation and tricolor work.	24.95	39.95	109.95	579.95	12.00	22.40	47B
58	Green tricolor. Used for color separation and tricolor printing.	10.90	16.95	44.95	242.95	12.00	22.40	58
61	Deep green tricolor. Used with #'s 29 and 47 for tricolor work.	24.95	39.95	109.95	579.95	-	-	61
87	Visibly opaque infrared filter.	24.95	39.95	109.95	579.95	12.00	22.40	87
87C	Visibly opaque infrared filter.	24.95	39.95	109.95	579.95	-	-	87C
89B	Visibly opaque. used for infrared photography, especially aerial.	24.95	39.95	109.95	553.95	-	-	89B
90	Dark grayish amber. Monochrome viewing filter.	10.90	16.95	44.95	242.95	-	-	90
92	Red.	24.95	39.95	109.95	579.95	-	-	92
98	Blue. Equivalent to #47B plus #2B filter.	24.95	39.95	109.95	579.95	-	-	98
99	Green. Equivalent to #61 plus #16 filter.	10.90	16.95	44.95	242.95	-	-	99
102	Yellow-green. Converts barrier-layer photocell response to eye luminosity response.	24.95	39.95	-	579.95	-	-	102
106	Amber. Converts an S-4 type photocell response to the eye luminosity response.	24.95	39.95	109.95	-	-	-	106



### Ultra Violet Absorbing Filters

Used to absorb varying amounts of ultra violet, violet and blue radiation which can cause a bluish cast in distant landscapes, scenes over water, and aerial photographs.

#### ULTRA VIOLET ABSORBING FILTERS

FILTER	DESCRIPTION AND SOME OF ITS USES	KODAK				ITEM #
		3x3"	4x4"	6x6"	14x18	
		CODE # KO( )33	CODE # KO( )44	CODE # KO( )66	CODE # KO( )1418	
1A	Maximum absorption of 0.076A (84%) at 535 nanometres.	-	-	-	-	1A
1B	Maximum absorption of 0.086A (82%) at 525 nanometres.	-	-	-	-	1B
2A	Pale yellow. Absorbs ultraviolet radiation.	10.90	16.95	44.95	242.95	2A
2B	Pale yellow. UV absorption greater than 0.72A (19%) at 400 nanometres.	10.90	16.95	44.95	242.95	2B
2C	UV absorption greater than 0.39A (40.5%) at 400 nanometres.	-	-	-	-	2C
2E	Pale yellow. Absorbs more ultraviolet radiation than 2C.	10.90	16.95	44.95	242.95	2E

*To order Ultra Violet Absorbing Filters, insert item # into the parenthesis in the middle of the code #.*

#### Kodak Haze Cutting Filter (for color aerial photography)

Haze Cutting Filter HF-3 serves primarily as an ultraviolet absorber, while the HF-4 and HF-5 filters - always used in combination with the HF-3 filter - provide color balance adjustment in the blue region.

##### HF-3 Haze Aerial

UV absorber for color aerial photography and haze penetration.

3x3" *Item # KOHF333.....18.95*      4x4" *Item # KOHF344.....29.50*

12x12" *Item # KOHF31212.....168.95*

##### HF-4 & HF-5

These filters provide color balance adjustment.

3x3" *Item # KOHF 433 or 533 .....18.95*      4x4" *Item # KOHF 444 or 544 .....29.50*

12x12" *Item # KOHF41212 or 51212.....168.95*

#### Kodak Glass Filters

Wratten Ultraviolet Filter #18A

2x2" *Item # KO18A22 .....Call*

3x3" *Item # KO18A33 .....Call*

Wratten Duplicating Filter #39

2x2" *Item # KO3922 .....Call*

3x3" *Item # KO3933 .....Call*

#### Color Print Viewing Filter Kits

##### Kodak Color Print Viewing Filter Kit (E150-0735)

This handy kit of six color (Cyan, Yellow, Magenta, Red, Green and Blue) print viewing-filter cards of CC10, 20 and 40 will help you evaluate the color balance of your test prints. The value and color of the viewing filter or filters you select to correct the test print determine how much to change the exposing filter pack for the next print.

*Item # KOBCPVFK .....21.95*

##### Lee Viewing Kit (VK)

This Lee camera filter viewing kit contains six cards. There is one for each color compensating filter color: Cyan, Yellow, Magenta, Red, Green and Blue. In each color there are filter pieces of all the most useful densities: 025, 05, 10, 15, 20, 25, 30 and 40, and one clear filter.

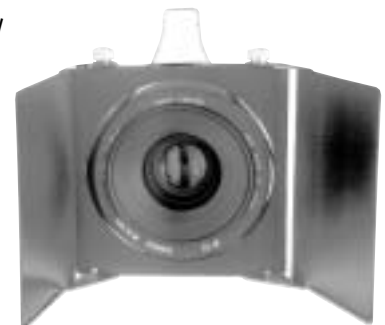
*Item # LEPVS.....59.95*

#### B&H Gelatin Filter Holder

##### Gelatin Filter Holder/ Lens Hood

Holds three inch 75x75mm gelatin or plastic materials. Easily attaches to lenses from 20mm diameter to 67mm diameter with spring-loaded clamp. No extra rings or adapters to buy. Barn-door type wings serve as a lens shade.

*Item # GBFH33 .....32.95*



# KALT/KENKO/NIKON/LINDAHL

## F I L T E R   H O L D E R S

FLEXIBLE FILTERS

402

### Flexible 3x3" or 4x4" Filter Holders

#### Kalt Technical Filter Holders

Holds 3" square 75x75mm (49 thru 62mm sizes) or 4" square 100x100mm (67 thru 77mm sizes) gelatin filters or other materials up to 2mm thick. Maintains flat surface between two padded sides of holder. Easily closes with half-turn of knob at top of holder. Once attached to the front of the lens, the holder may be rotated. Mounting ring of 49mm thru 62mm sizes accepts 62mm screw-in filters in front of gel filter holder. 67mm thru 77mm accepts 82mm size screw-in filters in front of gel filter holder.

49mm (Fits 3x3" Gels)  
Item # **KAFH49** .....**44.95**

52mm (Fits 3x3" Gels)  
Item # **KAFH52** .....**44.95**

55mm (Fits 3x3" Gels)  
Item # **KAFH55** .....**44.95**

58mm (Fits 3x3" Gels)  
Item # **KAFH58** .....**44.95**

62mm (Fits 3x3" Gels)  
Item # **KAFH62** .....**44.95**

67mm (Fits 4x4" Gels)  
Item # **KAFH67** .....**59.95**

72mm (Fits 4x4" Gels)  
Item # **KAFH72** .....**59.95**

77mm (Fits 4x4" Gels)  
Item # **KAFH77** .....**59.95**



#### Nikon Gelatin Filter Holder

**AF-1 52ø** (2278)  
Holds 3" square 75x75mm filters or other materials up to 2mm thick. Same features as the Kalt Technical Filter Holder. Built-on 52mm mounting ring. Accepts 60mm screw-in filters or Nikon HN-12 hood in front of gel filter holder.  
Item # **NIAF1** .....**34.95**



#### Nikon Gelatin Filter Holder

**AF-2 72ø** (2279)  
With lens hood. Holds 4" square 100 x 100mm filters or other materials up to 2mm thick. Same features as the Kalt Technical Filter Holder. Built-on 72mm mounting ring. Accepts 82mm screw-in filters in front of gel filter holder.  
Item # **NIAF2** .....**54.95**

**Kenko Technical Filter Holder II Small (3 x 3") 62ø**  
Same features as the Kalt Technical Filter Holder. Built-on 62mm mounting ring. Accepts 62mm screw-in filters in front of gel filter holder. It includes a lens hood.  
Item # **KEFHS** .....**39.95**

**Kenko Technical Filter Holder II Large (4 x 4") 82ø**  
With 82mm screw-in lens hood. Holds 4" square 100x100mm filters. Built-on 82mm mounting ring. Accepts 82mm screw-in filters in front of gel filter holder.  
Item # **KEFHL** .....**59.95**

### Lindahl Filter Boxes

Lindahl Filter Boxes allow you to convert other manufacturers shades to accept Lindahl 3G filters (see Flexible Filter section). In addition these filter boxes can be used alone as a filter holder. Requires size 8 adapter rings (See page 241).

**Filter Box Standard** (23-1020)  
Requires size 8 adapter ring.  
Item # **LIFBKS** .....**33.50**

**Filter Box Rollei SLR Size VI Bayonet** (23-1026)  
Item # **LIFBKR** .....**48.50**

**Double Filter Slot Filter Box Hasselblad CF** (23-1035)  
Item # **LIFBKDH** .....**43.95**

**Filter Box Hasselblad CF** (23-1025)  
Item # **LIFBKH** .....**36.95**

**Double Filter Slot Filter Box Standard** (23-1030)  
Requires size 8 adapter ring.  
Item # **LIFBKDS** .....**51.95**

**Double Filter Slot Filter Box Rollei SLR Size VI Bayonet** (23-1036)  
Item # **LIFBKDR** .....**69.50**



### Lindahl Filter Boxes with Hoods

**Single Filter Box Standard** (23-1040)  
Requires size 8 adapter ring.  
Item # **LIFBHS3** .....**54.50**

**Double Filter Filter Box Standard** (23-1050)  
Requires size 8 adapter ring.  
Item # **LIFBHDS3** .....**73.95**

**Single Filter Box Hood Hasselblad CF** (23-1045)  
Item # **LIFBHH3** .....**69.95**

**Double Filter Filter Box Hasselblad CF** (23-1055)  
Item # **LIFBHDH3** .....**88.95**

**Single Filter Box Rollei SLR Size VI Bayonet** (23-1046)  
Item # **LIFBHR3** .....**69.95**

**Double Filter Filter Box Rollei SLR Size VI Bayonet** (23-1056)  
Item # **LIFBHDR3** .....**88.95**