

Using Filters



- **Skylight 1A** - A skylight filter slightly warms the image which is useful on cloudy days, with photos taken in the shade and flowers. With a digital camera, this filter has another benefit. Auto White Balance often produces images that are slightly cool toned. A skylight filter corrects that unnatural bluish tone.



- **UV Ultraviolet** - UV filters remove excess ultraviolet light. UV light causes haze and a bluish cast which is most noticeable in landscape photos and photos shot with telephoto lenses. A UV filter helps remove that haze and blue cast resulting in a clearer, sharper image.



- **Polarizer** - Polarizers turn the sky blue a deeper blue and remove reflections from windows and water. They are most effective at an angle of 90 degrees to the sun. In other words, sun to the right or left of you. Polarizers have an adjustable ring which allows you to change the intensity of the filter. For manual focus cameras and mirrorless digitals, a linear polarizer works well. For autofocus cameras and D-slr's, a circular polarizer is required. With digital cameras, polarizers help reduce the purple fringing caused by high contrast lighting. Do not use a polarizer with an ultra wideangle lens. The polarizing effect will only cover part of the sky.



- **Neutral Density** - ND filters reduce the amount of light entering the lens. This is useful when you need a slow shutter speed but the light is simply too bright to allow the adjustment. Use it for waterfalls, landscapes and seascapes.



- **Graduated** - Graduated filters are dark on the top while gradually growing lighter toward the bottom. They darken an overly bright sky while preserving the brightness of the land below. They are useful for sunsets and seascapes. They come in many colors and in neutral density. Be careful to buy a filter that has the transition line that you need. I suggest a soft transition.



- **Diffusion** - Diffusion or 'soft focus' filters make edges less sharp. This effect is useful for portrait photography as it softens and hides imperfections in the skin. Wide apertures increase the effect while small apertures decrease the effect.



- **Multi-Image Prisms** - Prisms come in many styles. They are useful for creating kaleidoscope effects.



- **Yellow K2** - There are several intensities of yellow available. Yellow is most useful with B&W film. It darkens sky and adds contrast to landscapes. It provides low contrast boost.



- **Green** - There are several intensities of green available. Green is used with B&W film. It brightens grass and trees while only slightly darkening blue sky. It is also used in B&W portraiture. It provides a medium contrast boost.



- **Orange** - There are several intensities of orange available. Orange is used with B&W film. It brightens rosy skin tones and darkens blues/greens.



- **Blue** - There are several intensities of blue available. Blue is used with B&W film. It clarifies fog, darkens yellows and brightens blue sky. Most people use **80a** filters when they need blue.



- **Red** - There are several intensities of red available. Red is used primarily with B&W film. It brightens reds while darkening greens. It has a high contrast effect. It is most useful for architectural images, such as cityscapes. Deep red filters are used for infrared film photography and with IR converted D-slr's.



- **Center Spot** - This filter keeps the center of the photo sharp and clear while blurring the rest of the image.



- **IR Cut** - These come in different strengths but all are used to shoot Infrared with an un-modified digital camera. They do not allow any visible light to pass through them. They require long exposure times. The camera's meter will not work when using this filter. Do not use this filter with infrared film or modified D-slr's.



- **80a, 80b** - Color correction filter for color film. For use with daylight balanced films in household tungsten lighting. It counters the yellow/orange caused by tungsten lights. Specifically it converts 3200K light to 5500K daylight. **80b** converts 3400K to 5500K daylight.



- **82a,82b** - Color correction filter for color film. It reduces the warm glow from morning light and late afternoon light. **82b** is only 100K stronger than **82a**.



- **81a, 81b, 81c, 81ef** - Color correction filter for color film. **81a** warms an image by 200K, **81b** 300K, **81c** 400K, **81ef** 650K. These are used to warm landscapes and accentuate skin tones. They are all pale orange filters. If your camera's white balance is on the bluish side you can use one of these to correct it.



- **85,85a,85b,85c** - Color correction filter for color film. Balances tungsten film for daylight use. **85** is for using Type A tungsten film in daylight. **85a** has a slightly warmer effect on type A film than the **85**. **85b** is for converting type B tungsten film for daylight use. **85c** is slightly cooler than **85b**.



- **FL-D** - Color correction filter for color film. This filter corrects the greenish color shift from general fluorescent lighting when using normal daylight balanced film



- **FL-B** - Color correction filter for color film. This filter balances Type B tungsten film for use with fluorescent lighting.



- **FL-W** - Color correction filter for color film. This filter balances daylight film for use with warm fluorescent lights.



- **CC30M** - Color correction filter for color film. This filter corrects the greenish color shift from general fluorescent lighting when using normal daylight balanced film. It is similar to the **FL-D**.



- **Close-Up** - Close up filters are essentially magnifying glasses for your lens. They come in various strengths; usually +1, +2 and +4.



- **Series Filters** - Series filters are for vintage cameras. Please click [here](#).



- **BAY Filters** - BAY filters are for specific vintage cameras. Please click [here](#).

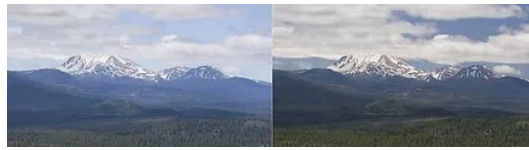
USING FILTERS

We'll cover the most important filters in this section. These filters are a necessity for film and digital photography. Photoshop is not a substitute for the effect these filters have on your photo.

Polarizer - It is important to know when to use a polarizer and why. Polarizers remove the glare that is produced when light reflects off a surface at about a 90 degree angle to the light source. The key word here is reflect. Any reflective surface can produce glare. In the photographic world we are mostly concerned with reflections in windows, water and the sky. So, if you are looking at the sun, the sky to the left and right of you contains polarized light. Direct light is not affected by the filter. Only the areas to the left and right of you in relation to the light source will be affected by the filter. The polarizer filter removes the glare from the reflective surface. These filters are designed to let you dial in the amount of filtration you want to use. It is necessary to spin the filter until you see the effect you desire. As you can see in the example of the sky, removing glare deepens the blue sky and defines the edges of the clouds. In the water example, removing glare lets you see into the water. Window glare is affected in the same way. Since polarizer filters remove light from the photo you may need to compensate for the exposure loss. It may be as much as two stops. If you are using an autofocus slr you need to use a circular polarizer to avoid focusing issues. If you are using a manual focus slr you may use either a linear or circular polarizer. In addition to the examples listed, polarizer filters can deepen the colors in autumn foliage pics by removing glare from the leaves and sky. Polarizer filters also help reduce chromatic aberrations like purple fringing by reducing the brightness of the sky. Please remember, if you do not see the desired effect in the viewfinder then the light you are trying to filter is not a reflective glare and can not be removed by the filter. Polarizers will reduce your exposure by 1 to 2 stops. NOTE: Do not use a polarizer with an ultra wide lens. The lens' field of view is wider than the affected view of the filter. Only part of your image will show the effect.



Ultraviolet (UV) - UV filters block the ultraviolet radiation which causes blur and haze in photos. They also make great lens protectors because they do not effect color balance or change your photo's exposure. If you were to own one filter, this is the one you should own. UV filters do not need to be adjusted, just kept clean. You can see in the example below that a haze filter can greatly improve your landscape photos. Haze is always present but is most noticeable when viewing objects over long distances. Haze is also magnified when you use a telephoto lens. If your telephoto pics are bluish and hazy, you need a UV filter. You can maximize the effect of the UV filter by using a small aperture. Small apertures, like f11, sharpen your image and that helps reduce the blur effect, especially on digital cameras. Really, it helps.



Neutral Density (ND) - ND filters reduce the amount of light entering the lens. They do not affect the colors in your photos, only the exposure. It is important to note that ND filters don't directly cause an effect, they merely make it possible for the photographer to create the effect. What do I mean by that? Let's use a waterfall as an example. To make the water appear softer and blurred we need to use a slow shutter speed. The slower the speed the more blur we see. Sometimes though we don't have the option to use a slow shutter speed. It's just too bright. Our ISO is as low as it will go. Our aperture is as small as it will go and our shutter speed is still too high because there is too much light. ND filters to the rescue. If you put a 4 stop ND filter on your lens, you can change your shutter speed from 1/125th sec. down to 1/8th sec. Bingo, now you can blur your water. The filter didn't cause the blur, it gave the photographer the ability to choose by reducing the amount of light entering the camera. Any time you need to reduce the amount of light to allow a slow shutter speed and create blur, use a ND filter. ND filters come in various strengths. Typically, you want a filter that reduces at least 3 stops of light..



Graduated ND - These filters work on the same premise as ND filters but they are only half coated with light reducer. This half coating allows you to darken bright skies. Be careful to buy a graduated ND that has the transition line that you need. I suggest a soft transition.



Close Up - Close up filters are an inexpensive way to turn your lens into a macro lens. When you need to get very close to an object to see small details but you don't have a macro lens, use a closeup lens. Close up lenses are great for coin and jewelry photography, but they can produce a large amount of distortion around the edges. Closeup lenses may slightly increase exposure.



SPECIAL PROBLEMS

Do not use a polarizer on an ultra wide lens. The lens' field of view is wider than the effective filtered area in the photo. You will get severe banding.

When using filters on ultra-wide angle lenses, be sure to clean them very very well. The smallest amount of dust or smear will be viewable in your photo. The depth of field is so large on ultra-wides that you are actually capturing the filter in the photo.