B+W Polarizer Filters

Highest Rating **"SUPER"** ▶
for B+W Circular-Pol MC and
B+W Linear-Pol/Kaesemann (7/89).

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B+W Circular-Pol/Kaesemann
(8/95).

1 B+W 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. The filter factor varies according to how the filter is positioned in relation to the sun. Filter factor is between 2.3 and 2.8.

2 B+W Circular Polarizer

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. Filter factor is 2.3 to 2.8.

3 B+W Kaesemann Polarizer

This high quality polarizer is crafted from select polarizer foils and specially prepared optical glass. This neutral polarizer is edge sealed and therefore, it is durable under extreme climatic conditions. The use of this filter is recommended for the most stringent imaging requirements, especially with fast telephoto lenses and apochromatic lenses. Available in linear or circular. Filter factor is 2.3 to 2.8.

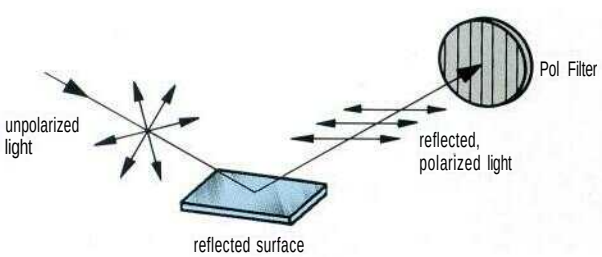
4 B+W Warm Tone Polarizer

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. Available in linear or circular. Filter factor is 2.3 to 2.8.

5 B+W Polarizer Foil

Useful in the polarization of light sources in reproduction work, polarizer foils are usually placed in front of the light source. Reflections can then be suppressed on metallic or strongly curved surfaces via a second polarizer placed in front of the lens. Among other uses, this filter helps produce reflection-free flash pictures. When a transparent object is photographed between two polarizers, stresses in the form of different colored effects are made visible.

See pages 47 - 49 for available types and sizes.



For a polarizer to work, a condition of polarized light is necessary. Light rays diverge in a manner similar to that of a water wave. Light from the sun or a lamp consists of rays vibrating in many directions simultaneously. This is called unpolarized light. Light rays vibrating in only one direction are called linear polarized light.

B+W polarizers have a foil, which consists of a grid construction, cemented between two pieces of glass. This grid construction is invisable to the eye, and it only allows light rays vibrating parallel to the foil grid to pass through. Light rays which are vibrating perpendicularly to the foil grid are totally blocked while other directions are partially suppressed.

When light is reflected from a surface, a polarization of the reflected light develops. The degree of polarization depends on the angle of incidence of the light which varies according to the characteristics of the material. Light reflecting off water surfaces has a maximum polarization of under 37 degrees, while reflection off glass is under 32 degrees. Wood, grass, plastics, and lacquer also polarize light. Only untreated metal surfaces reflect light randomly. With the aid of a correctly positioned polarizer, reflections can be totally eliminated under ideal conditions. This occurs when the illumination angle and picture taking angle are almost equal and the angle of the maximum polarization is in the range of 30 - 40 degrees. The effect of B+W polarizers can be observed through the viewfinder while rotating the front element of the polarizer.

Linear and circular polarizers both consist of a linear polarizer foil but differ in their construction in the following way. Modern SLR cameras have a beam-splitting prism that sends part of the incoming light to the meter and part to the viewfinder. The effect is that the light entering the meter is partially polarized by the beam-splitter. A linear polarizer placed on the lens of such a system will act as a second polarizer and block light to the meter to a degree dependent on the angle between the prism and the polarizer on the lens. The result is incorrect exposure/aperture values from the meter. The circular polarizer circumvents this problem through the addition of a 1/4-wave retarder, or delay, foil. This ensures that the linearly polarized light is changed into a rotation that appears unpolarized to the meter, resulting in proper exposure/aperture readings.

Using a polarizer to intensify cloud formations has a dramatic effect in landscape photography. The blue of the sky polarizes much more than the light scattered by the clouds. Polarizers also bring out deep, rich greens in foliage and reduces the objectional effect of smog in a photograph of a cityscape horizon.