

Camera Lens Filters



As a budding or aspiring photographer, you've likely seen or even used camera lens filters before. Photographers use these little pieces of glass for a multitude of reasons, but the most common is for managing tricky lighting conditions when shooting.

Filters help minimize glare and reflections, enhance colours, reduce light coming into the lens, and more. Each lens filter serves a specific purpose, as each one is built to deliver a specific effect that can help enhance the final look of an image.

How are Camera Lens Filters Used in Photography?



They Protect Your Lens

The most affordable types of lens filters are those that are clear and simply used for protection. These are great for protecting the front lens element during normal shooting situations, as the clear glass does not affect your images in any way. Protective lens filters eliminate the possibility of scratches, cracks, and dust accumulating on the surface of your lens.

They Can Correct or Enhance Colours

There are certain types of photography filters that can alter or boost the colours in your images. Some have the ability to correct the colour temperature of a scene, while others can enhance colour and contrast for a more vibrant image.

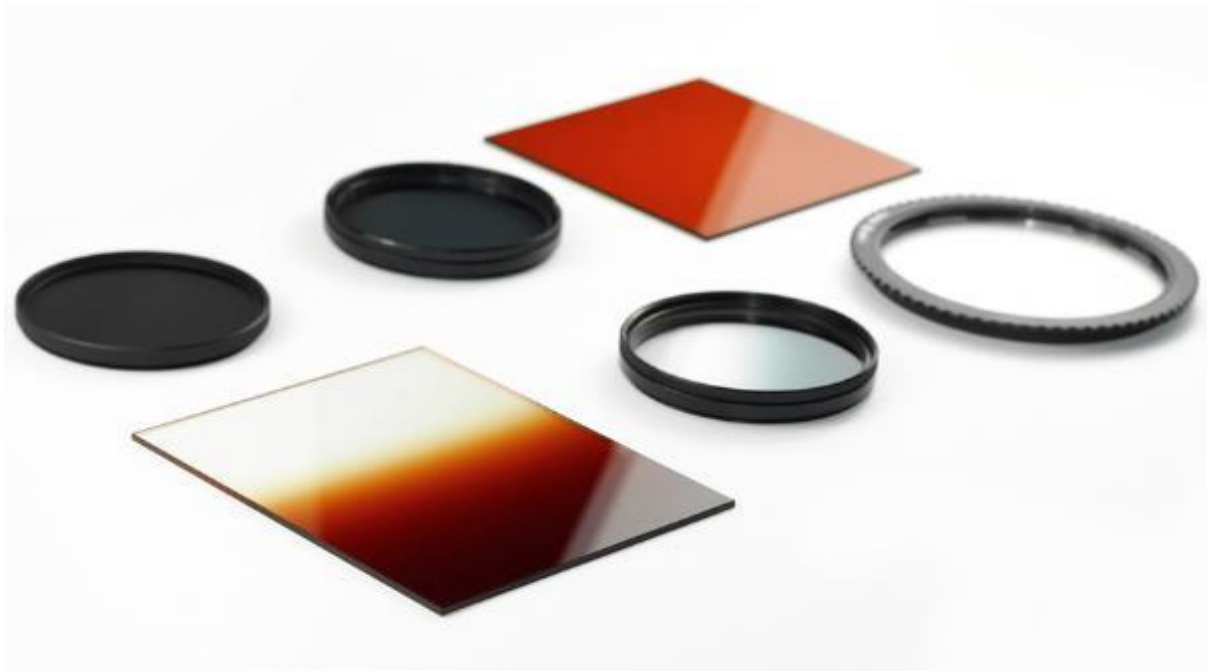
They Help Ensure Accurate Exposure

When working with particularly difficult lighting conditions, filters are a great option for achieving even and accurate exposure across your entire image. They do this by blocking some of the light that enters the lens (in varying degrees). These are particularly helpful when shooting outdoors during daytime, particularly when using fast shutter speeds may not be enough to avoid overexposure.

They Add Impact to Your Images

Camera filters can help improve your images in various ways—they're useful for increasing contrast in an image, creating more vivid colours, eliminating glare and distracting reflections from water and glassy surfaces, and more. But they can also be used to add a little oomph to an otherwise lacklustre shot by adding some interesting effects, like multi-point "stars" on light sources or softened edges.

Different Kinds of Lens Filters



1. Screw-On Filters

Also called a circular filter, this is any lens filter that is directly mounted and screwed onto the front of a lens. There are different camera filters that fall under this category, including the most commonly used ones like polarizers, ND filters, and colour filters. They usually vary in diameter or thickness, and the thickest ones can sometimes produce vignetting in your images.

2. Drop-in Filters

Drop-in filters are used primarily with telephoto lenses, as they often have larger front elements and cannot always be used with a standard screw-on filter. As its name suggests, a drop-in filter is inserted into a small, specialized compartment near the rear part of the lens.

3. Square Filters

These filters are normally used with a lens filter holder that is attached to the front of the lens. You'll only need to get adapters for your lens filter holder in order to be able to use one or more filters of different sizes. This type of filter is popularly used for landscape photography.

4. Rectangular Filters

Another popular choice for landscape photographers is rectangular filters, which are also mounted with a filter holder. Using a rectangular filter gives the photographer more space to move around the subject without risking uneven spots. Its most popular size is 4x6, but there are smaller and larger filters available as well.

7 Types of Camera Lens Filters



Filters are relatively inexpensive as far as camera gear goes, but if you don't know the right ones to buy for your own needs or how you can use them to improve your photos, you may just end up wasting your money.

In the following lens filter guide, the different types of camera filters and their corresponding effects are explained to help you figure out which ones you need:

UV and Skylight Filters



Protective UV and skylight filters are often used in the past to protect the front element of a lens against moisture, dirt, and scratches, which makes them ideal for shooting in wet, dusty, or muddy environments. UV filters were also used to prevent the UV light from causing haze and fogging in older photographic films, which were typically more sensitive to UV rays. However, most modern digital cameras have a UV/IR filter on the front of the sensor, making the use of an external filter useless; adding only a minimum amount of protection for the camera lens, protection better served by a lens hood, usually supplied with the lens.

On the other hand, skylight filters are useful when shooting under a clear blue sky. They can reduce the excessive blue cast that often appears in photographs taken outdoors. They can also keep skin tones free of colour reflections from objects that are around the subject. Consider a polarising filter to achieve the same results.

Keep in mind, however, that with a UV or skylight filter as your lens' protection, the image quality of your photos may be compromised as it can intensify lens flares that tend to add a colour tint and reduce image contrast. The lens hood will reduce flare and not add a colour cast to your image.

Most suitable for: All kinds of photography

Polarising Filters



Polarising filters, pretty much like sunglasses, add depth to an image by saturating its colour and reducing reflections. These round filters have a rotating mount that's easy to attach to a lens. Once a polarising filter is mounted on your lens and the subject is already framed, you can slowly rotate the filter while watching how the image changes in your camera's viewfinder or live view.

Polarisers are best for shooting landscapes. They darken skies and make colours pop, as well as eliminate glare and reduce reflections on glassy or water surfaces.





When photographing landscapes, avoid panning your camera because it can create uneven, dark areas in the sky. Also, you need to be careful when using this filter with an ultra-wide-angle lens, as it can also cause the blue colour of the sky to look uneven in your photos. Choose a filter that is at least the same outside diameter as your lens to avoid vignetting (darker corners).

Most suitable for: Mainly landscapes and water-based shots

Neutral Density Filters



Neutral density (ND) filters are sheets of dark-coloured glasses that reduce the amount of light that enters your lens and hits to the sensor, but without affecting the colour of the resulting image. This includes excess sunlight and powerful light from studio flashes.

An ND filter doesn't need any adjustment at all, and you can still use the metering and focusing system of your camera and lens even with this filter attached to your lens.



By reducing the intensity of incoming light, this filter allows you to shoot with slower shutter speeds without overexposing your image. In that case, if you're going to take a photo of a moving subject like flowing water, make sure to use a tripod for more dramatic motion blur and to ensure that everything else is tack sharp.

Most suitable for:

- Landscape photography
- Brightly lit images where there is no control of the light source (sun)
- Flash photography
- Street photography
- Photographing moving bodies of water like rivers and falls

Graduated Neutral Density Filter (GND)

Graduated neutral density filters (also known as ND Grad or GND filters) have a vertical transition between dark and clear to balance the exposure between the sunny sky and its darker foreground. They vary in darkness and are measured in “stops”—the number of stops of light determines how much it will darken part of the scene you are trying to capture.



Soft Edge



Hard Edge



GND filters generally come in three common types: soft-edged, hard-edged, and reverse.

- **Hard-Edge GND Filter** – Has a neutral grey half that sharply transitions to clear at the centre. It is mostly used to balance out high-contrast scenes, such as a flat horizon with bright skies and a dark foreground, to create an evenly exposed image.
- **Soft-Edge GND Filter** – More commonly preferred for its smoother gradient between the dark and clear areas, this filter is best used if the horizon is not perfectly straight or flat; you can also opt for this if the hard-edge filter tends to create a noticeable midline for your chosen scene.
- **Reverse GND Filter** – Special filter that landscape photographers use to shoot beautiful sunrises and sunsets when the sun is much closer to the horizon. Unlike regular GND filters that transition from dark to light in the middle, this type changes from dark (for the sky) to darker (for the sun) on the top half and then all clear on the lower half (for the foreground).

Most suitable for:

- Landscape photography
- Shooting during the golden hours: after sunrise and before sunset

Colour Correcting Filters



Colour correcting filters, also known as cooling and warming, colour conversion, or colour compensating filters, are used to correct and/or enhance the colour of your scene. Warming and cooling filters are great for correcting indoor lighting and making your scene look gloomier or sunnier while other coloured filters are great for bringing out certain hues in a scene.



For those who'd rather skip the colour correction in post-production, these are helpful in making your images look more beautiful, accurate, and realistic.

Most suitable for: All kinds of photography

Close-Up Filters



Close-up filters (also known as macro filters or dioptres) are used to enable macro photography without having to use a dedicated macro lens. Many photographers resort to purchasing these small pieces of glass than invest in more costly macro lenses, especially when they don't necessarily have to take close-up shots all the time.



Then again, these lens filters can't replace the magnifying power of actual macro lenses. Close-up filters are just like reading or magnifying glasses that help regular lenses focus more closely on subjects.

Most suitable for: Macro and still life photography

Special Effects Filters



Special effects filters serve different purposes in improving your images. Perhaps the most popular type of special effects filters is the starburst filter, which effortlessly adds a noticeable twinkle to image highlights and light sources such as street lamps and Christmas lights. You can choose from filters that produce two-, four-, six-, or eight-point stars and light flares.





Other special effects filters include infrared filters, multi-vision, centre-spot or diffusion filters, and day for night filters. However, most of these have lost their popularity since their effects can now be easily reproduced in Photoshop. What can't be easily replicated, however, are the unique effects of bokeh filters on out-of-focus blur.

Most suitable for: All kinds of photography

Small as they may be, lens filters play a huge role in the outcome of your images. If you like instant results and hate spending time and effort in post-production, using lens filters is the option for you and we hope this lens filter guide was able to help you understand how and when you can use them to improve your photography.

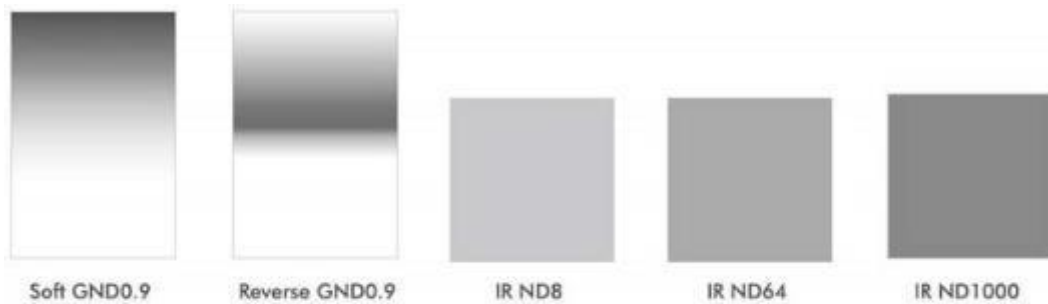
Camera Lens Filter Overview

Lens Filter	Effect	Photography Type
UV & Skylight Filter	<ul style="list-style-type: none"> Protects lens glass Shields old photography film from UV rays 	All
Polarizing Filter	<ul style="list-style-type: none"> Reduces reflections and glare Enhances colours and contrast 	All
Neutral Density Filter	<ul style="list-style-type: none"> Reduces the amount of light entering the lens Allows the use of slower shutter speeds and wider apertures Helps create motion blur 	Landscape, Brightly Lit and Flash Photography
Hard-Edge Graduated ND Filter	<ul style="list-style-type: none"> Reduces the amount of light entering the lens through the top half of the filter Provides a sharp transition between dark and clear for flat horizons Balances exposure and high contrast between bright midday skies and dark foreground 	Landscape Photography Set the filter on the horizon
Soft-Edge Graduated ND Filter	<ul style="list-style-type: none"> Reduces the amount of light entering the lens through the top half of the filter Provides a smoother transition between dark and clear so use of filter is not evident Balances exposure and high contrast between bright midday skies and dark foreground 	Landscape Photography (Adjust the filter vertically or to the angle of a building to reduce the sky amount)
Reverse Graduated ND Filter	<ul style="list-style-type: none"> Reduces the amount of light entering the lens around the upper midline 	Landscape Photography

	<ul style="list-style-type: none"> • Provides a smooth transition from dark to less dark from the middle to the top edge • Properly exposes the sun for clearer sunsets and sunrises 	
Coloured Filter	<ul style="list-style-type: none"> • Corrects colours for accurate white balance • Enhances or blocks one type of colour 	All
Close-Up Filter	<ul style="list-style-type: none"> • Allows closer focusing on subjects • Helps capture sharp close-ups 	Macro Photography
Special Effects Filters	<ul style="list-style-type: none"> • Produces multi-point star sparkles • Softens or diffuses edges for dream-like effect with sharp centre • Creates multiple copies of a subject or scene • Blocks infrared light and passes visible light • Customizes the shape of bokeh lights 	All

5 Benefits of Using Photography Filters When Taking Photos

Filters are a great piece of kit to consider carrying with you in your camera bag, particularly when you have been doing photography for a while and are more up to speed with how to use your camera. They can be used to reduce the amount of light that would otherwise ruin an image, or they can be used to artistic effect, especially when working with water. Described below are several key reasons and benefits to using filters as well as how to use them and the different types of filters available.

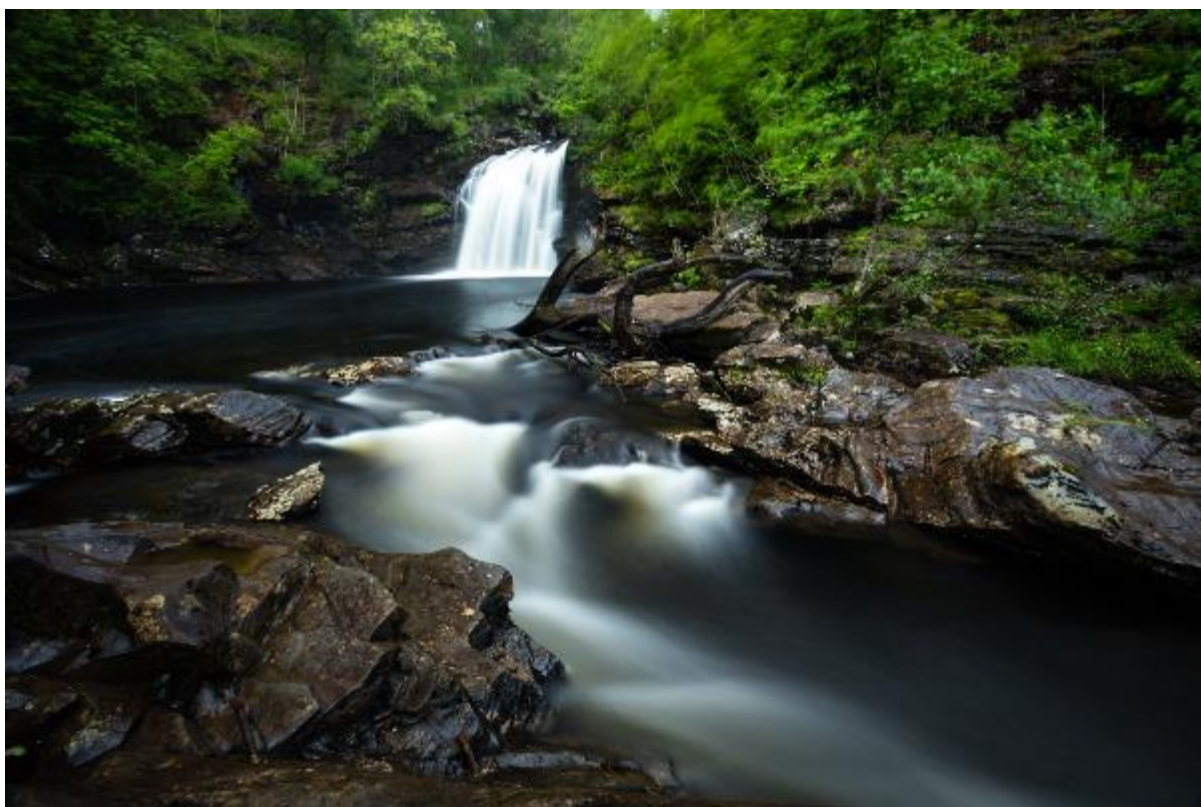


1. Add Colour and Contrast

Filters are a great way to improve your landscape photos. One of the most popular types of filters available on the market today is a polarizing filter.

There are a few reasons why it is beneficial to use polarizers.

Polarizing filters reduce reflections such as those found on glass or water. They can also help to restore natural colour saturation and improve the contrast in your images. An example where a polarizer can be beneficial is when photographing woodlands, waterfalls or greenery to bring out more colour in the vegetation.



You can vary the intensity of the polarization effect by rotating the filter until you achieve the desired effect. For the optimum effect, you are best to point your camera at around a 45-degree angle to the sun.

There are two types of polarizers available: a square and a circular version. You can use them as part of a square or round filter system.

You can place a square type of polarizing filter into one of the slots of the filter holder system that is attached to the camera lens via an adaptor ring.

The circular polarizer option either screws onto the front of the lens directly or attaches to the front of the square filter system by a ring. The front dial of the filter is then turned to polarize the light on the scene you photograph. Simply rotate the filter to see the effect you are looking for.

2. Create Movement



Another great advantage of using photography filters is to create some motion in your pictures. Have you ever wanted to create more movement to a static looking scene? Well, by using a Neutral Density (ND) filter, you can.

The way an ND filter works is by reducing the level of light that passes through the camera lens. If you haven't used them before, they are quite straightforward to operate. You simply slot the ND filter into a filter holder attached to the camera lens. It then blocks some of the light that enters the camera sensor so that you can still use slower shutter speeds in bright daylight.

They come in a range of different densities varying from one, two, three, or even 10 or 16-stops of exposure. The darker the filter, the more significant the loss of light and the stronger the effect they can generate.

You may be wondering; do you really need one? Well, that depends on what you are photographing.

The 10-stop and 6-stop ND filters are specifically designed for long exposure photography. The 10-stop works very well for extending exposure times and blurring moving subjects in your images. It is great for capturing the motion of foliage, clouds, or water.

In comparison, the 6-stop can be beneficial for low-light conditions at dawn and dusk.

They are both advantageous. You can use them to accentuate cloud movement, create cloud patterns, or make running water appear smooth.

3. More Balanced Exposure

You can use filters to help capture a scene accurately. The fundamental reason for using a Neutral Density (ND) graduated filter is to reduce the amount of light entering the camera across the shaded grey part of the filter and correctly record the scene.

ND graduated filters are very popular for landscape photography as they help to provide more balanced exposures.

As great as modern cameras are you will often find with high-contrast landscape scenes, your pictures will either have a burnt-out sky or a dark, underexposed foreground. This is where the Neutral Density (ND) graduated filter works its magic.



In these high contrast scenes, when there are two different very unevenly lit subject areas, an ND graduated filter can be an appropriate solution. Here, the graduation is set high in the image to darken the brighter area which then accentuates the mist below.

For example, when shooting bright skies or sunsets, the exposure between the sky and the foreground varies significantly. Hence, an ND filter helps to capture the entire tonal range from the brightest to the darkest parts of an image, thus achieving a balanced exposure.

Start by placing the ND filter in the filter holder and position the dark section of the filter over the bright sky. This reduces the amount of light transferred to the sky part of the image whilst allowing the foreground to expose correctly.

This way, you capture detail in both parts of the image without the sky washing out due to too much light.



In terms of the different types of ND grads available, they will either have a hard or soft edge where the gradation line gives a stronger or smoother transition from colour to clear, respectively.

Hard ND grads are better suited to scenes with straight horizons, while soft grads are favourable when objects like buildings and trees cross the horizon.

ND graduated filters come in different strengths from 0.3, 0.6, 0.9, and 1.2 gradations. A 0.9 ND filter reduces the exposure by 3 stops of light. ND graduated filters alter the transition from dark to light, with 0.3 being a weaker gradation, and 1.2 being a stronger gradation.

4. Enhance images

Using photography filters can help to enhance your photography and different types of images, especially when using special effects filters.

You can get specific special effect filters that slot into your filter holder, such as infrared or black and white filters. Other filters you can use to develop wonderful in-camera effects include sunset and sunrise filters. These provide warm colours for dawn and sunrise.



Mist and fog filters are another popular type of special effect filter. They are used to imitate the effects of mist by carefully positioning the filter in the holder. You can also use these filters to clean up images by the removal of distracting backgrounds to create minimal compositions.

Other various filters can enhance effects in your photos. If you love to capture vivid, saturated shots, investing in colour intensifiers is of benefit.

The intensifier filters broaden and enhance specific colours without affecting the other tones in your photograph.

Alternatively, there are sky filters available to enhance the colours in the sky, as well as autumn tint filters designed to accentuate golds, reds, and browns.

5. Change White Balance



When you are out capturing landscapes, you may want to alter the colour temperature of the scene. Using specialist colour temperature filters can be great for changing colour tones with no added colour cast.

Consider using photography filters that help to brighten up or cool down the white balance and give accurate colour temperature corrections.

Coral filters are a great way to warm up a scene by adding pinks and reds.

Conclusion

In summary, popular filters, particularly amongst landscape photographers, include polarizers, graduated and neutral density graduated filters, and special effects filters.

Consider using photography filters as a way to add colour to your images, manage variations in contrast, and to create more dynamic movement such as with clouds or water.

Filters are also a wonderful accessory to help protect your lenses and balance your exposures where tones are significantly different.