FOUR ELEMENTS
PHOTO ADVENTURES

Neutral Density and Graduated Filters

What is an ND Filter?

ND filters are designed to reduce the amount of light entering the camera sensor. With less light entering the camera lens, a longer exposure or a wider aperture can be achieved.

ND Filters are square (for use with a filter holder) or round filters that screw into your lens. They typically range from 2 to 15 stops of density. ND filters can also be stacked to achieve the level of neutral density that you desire.

With an ND filter, you have a larger degree of control over the exposure of an image. You can shoot the stunning motion blur images that we are unable to see with our eyes.

When to use the ND filter?

1: The Motion Blur Effect

Shooting the flowing water particularly the waterfall is a time when you want to use an ND filter. Capturing the moving water with slow shutter speeds (1/15th of a second and longer) can create a silky effect, but it is basically impossible to achieve that effect on a bright sunny day even with the smallest aperture and the lowest ISO. In this situation, applying a proper ND filter is equivalent to stopping down one or more additional stops, thus providing a slower shutter speed that results in a motion blur effect.

2: Shallow Depth of the Field

If it's the middle of the day and you want to capture a nice shallow depth of field you'll need to have the aperture wide open. An ND filter can help you to achieve a shallow depth of field even under full sunlight.

Examples of this use include:

- Blurring water motion (e.g. waterfalls, rivers, oceans).
- Reducing the depth of field in very bright light.
- Reduce the visibility of moving objects.
- Add motion blur to subjects.
- Extended time exposures.

* There are a number of Phone Apps available to help you calculate the new exposure time when using ND filters. For Android users we suggest **ND Expert** and **LEE ProGlass**

What is a Graduated ND Filter?

A Graduated Neutral Density filter is slightly different from a regular ND filter. Part of the filter has an ND coating while the other half doesn't have any at all.

You won't see any difference in the lower half of the filter. But the f-stop reduction gradually gets higher as you go up. The highest ND number of a variable neutral density filter is usually around two-thirds of the way up the filter.

When to use a Grad Filter?

The filter is typically used for darkening a specific part of the image, not the whole scene. Photographers use them mostly for skies, especially since it can be 3+stops lighter than the horizon.

The purpose of the density gradation in the filter is to make the exposure transition from ground to sky a lot smoother. Otherwise, the separation line between the light and darkness would be too visible, resulting in blown out skies or dark foregrounds.

You can rotate these graduated filters if the lightest element is in the bottom half of the frame.

Likewise, if only the top third of the image is too bright, you can move the filters up or down to compensate. They come in the same strengths as the ND filters.