

# HOYA Variable Density II

## Instruction

The HOYA Variable Density II filter utilizes 2 polarized glass elements that when rotated allow you to control the optical density of the filter. This allows you to adjust the brightness/darkness of the filter to have more control over the exposure settings of the camera.

This filter can reduce light transmittance from ND3 (1 2/3 stops, 0.5) to ND400 (8 2/3 stops, 2.6). This allows for more creative shutter speed and aperture combinations to create the desired effect.

Notes:

1. When using this filter at its maximum ND value and beyond ( $\nabla$  matches with X), a common and unavoidable aberration, that is common to all Variable ND filters, may occur in the image. This is known as cross-polarization and will take the form of a darkened "X" pattern through the middle of the image and corners. The pattern is exaggerated and may occur earlier in the variable density range on lenses with a focal length wider than 28mm (for 35mm sized sensors).

Please use focal lengths 28mm and higher for best results.

2. During long exposure, it is recommended to cover or close the optical viewfinder to avoid light leaks.

3. This filter does not have front filter threads so it may be difficult to attach lens caps to protect the filter during transport. We recommend removing the filter and placing it into the included case when not in use.