

## UV ND Filters

This accessory can be used with any camera fitted with C-mount threads. Simply thread the attenuator assembly into the front of the camera and then slide the ND filter arrays to get the desired amount of attenuation. This device can be used with laser outputs from microwatts to Watts. Three filter holders are provided with two filters in each holder. Each filter in the holder provides for a different value of attenuation. To use, slide the desired holder into the housing slot. A click is felt when the filter is properly aligned with the beam. The holders provided will allow for attenuation of up to ND 6.

C-mount interface for universal application to our CCD and Pyroelectric cameras  
190-380nm attenuation covers Excimer, Helium Cadmium, and the Nd:YAG UV harmonic laser wavelengths. Attenuation with these ND filters permits the best use of the dynamic range of a beam profiling camera.

Attenuation range of 0.3 to 6.0 optical densities (ND).

Set consists of three slides with two filters in each slide.

The Six Filters include 0.3, 0.7, 1.0, 2.0, 3.0 and 4.0 optical densities.

Two filters can be employed at one time for 0.3 – 6.0 optical attenuation in 0.3 or 0.4 ND steps.

20mm clear aperture will not vignette any of our applicable camera sensors.

Damage threshold = 100W/cm<sup>2</sup> for CW lasers and 20mJ/cm<sup>2</sup> for nano-second pulse width lasers.

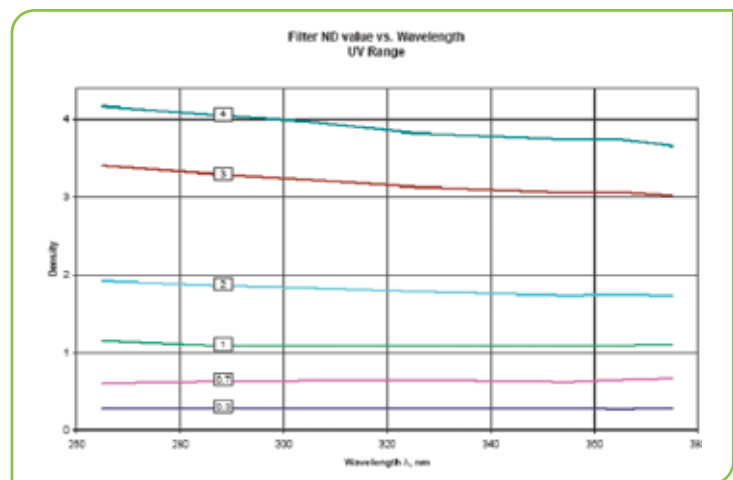
Additional Beam Splitters can be added for attenuation of high power UV lasers.

UV attenuation system uses high quality optics from the leader in laser beam diagnostics.



### Specifications

Item	UV ND Filters
Nominal ND (UV)	0.3, 0.7, 1.0, 1.3, 1.7, 2.0, 2.3, 2.7, 3.0, 3.3, 3.7, 4.0, 4.3, 4.7, 5.0, 6.0
Aperture	Ø20mm
Damage threshold	100W/cm <sup>2</sup> CW, 10ns pulses, no distortion



## Specialized Filters

There are also specialized filters available to eliminate extraneous wavelengths when measuring very short or very long wavelengths where the CCD cameras are not sensitive and the desired signal can get swamped by extraneous light of other wavelengths.

These filters are as follows:

The 355nm filter for monitoring the 3rd harmonic of YAG. This filter transmits 355nm but blocks 532nm and 1064nm.

Transmission	~ 60 at 355nm, zero at 532nm, and 5E-6 at 1064nm
Filter Thickness	4mm
Filter Spacing	8mm
Flatness	2 waves in the visible
Laser damage Threshold	0.6J/cm <sup>2</sup> and 50W/cm <sup>2</sup>

This filter has the same standard thread so it can be mixed with all the other components.  
See ordering information for more details.

### Ordering Information

Item	Description	P/N
ND1 stackable filter (red housing)	4mm spacing screw on filter for camera with transmission of between 20% and 5% depending on spectral range. Can be stacked and combined with other filters and beam splitters.. One filter is included with Spiricon cameras	SPZ08234
ND2 stackable filter (black housing)	4mm spacing screw on filter for camera with transmission of between 7% and 0.5% depending on spectral range. Can be stacked and combined with other filters and beam splitters. Two filters are included with Spiricon cameras	SPZ08235
ND3 stackable filter (green housing)	4mm spacing screw on filter for camera with transmission of between 2% and 0.05% depending on spectral range. Can be stacked and combined with other filters and beam splitters	SPZ08253
ATP-K	Variable Attenuator Package provides smooth knob operated variable wedges with attenuation of optical density (ND) 1.7–4.6 for a total attenuation capability of ND 7.4. Specially designed to eliminate ghost reflections, fringes, and light leaks. Small compact module including C-mount adapter to attach to camera, and C-mount receptacle to easily attach additional HP-series attenuators	PH00128
UV ND Filters	3 Filters holders each with 2 iniconel UV ND. Filters for attenuation up to ND 6	SP90228
Filter for 355nm-V2; give an undistorted image of the 355nm light	Silicon cameras can see the 355nm 3rd harmonic radiation of YAG. The YAG however usually emits some light at 532nm and 1064nm as well. This filter filters out the other 2 wavelengths to give undistorted image of the 355nm light	SPZ08246