



## **355nm Narrow Bandpass Filter for C-mount Cameras User Notes**

Ophir-Spiricon, LLC  
3050 North 300 W  
North Logan, UT 84341

For Sales, Service, or Technical Support  
Phone (435) 753-3729  
Fax (435) 753-5231  
E-mail: [sales@us.ophiropt.com](mailto:sales@us.ophiropt.com)  
E-mail: [service@us.ophiropt.com](mailto:service@us.ophiropt.com)

© Copyright 2013, Ophir-Spiricon, LLC, N. Logan, UT

### **Notice**

**© 2013 Ophir-Spiricon, LLC. All Rights Reserved.** Ophir-Spiricon, LLC reserves the right to make improvements in the product described in this User Guide at any time and without notice.

All rights to the product and any accompanying operator's manuals are reserved. While every precaution has been taken in the preparation of this product, the publisher and author assume no responsibility for errors, omissions, or any loss of data because of said errors or omissions.

# 355nm Narrow Bandpass Filter for C-Mount Cameras

## P/N SPZ08246, User Notes

The 355nm narrow bandpass filter, P/N SPZ08246, is designed for operation with pulsed 355nm laser beams from tripled YAG's. This optical accessory can be screw mounted into any camera fitted with C-mount threads. This includes most all of the standard cameras sold with LBA and BeamGage systems.

The spectral range of typical CCD cameras extend into the UV as far as ~190nm. However the typical camera begins to rapidly lose response below ~400nm. As the response drops off spurious wavelengths (such as pumping sources) may combine with the 355nm wavelength. Since the camera is more sensitive at the longer wavelengths they can sometimes modify the observed beam profile. By inserting a narrow 355nm bandpass filter the unwanted wavelengths can be essentially excluded.

This filter is housed into an 8mm thick stackable C-mount ring. When used in combination with other optical accessories that require controlled spacing from the CCD imager this 8mm distance must be taken into account. I.e., when using a 4X beam expander or 4X beam reducer, you should use the 355nm filter plus one other regular filter to keep the required 3 filter spacing. See figure below.

*Note: this filter takes up exactly twice the space of 2 standard 4mm black or red ND filters, or 2 standard black 4mm spacers, or 1 standard 8mm spacer.*

The 355nm bandpass filter also supplies some additional attenuation at the 355nm wavelength. See Transmission in the table below.

### Specifications:

Item	Specification
Transmission	~0.60 @ 355nm, zero at 532nm and 5E-6 at 1064nm
Filter thickness	4mm <sup>(1)</sup>
Filter spacing	8mm (same as two regular black or red filters)
Flatness	2 waves in the visible
Laser damage threshold	0.6J/cm <sup>2</sup> and 50W/cm <sup>2</sup>

