



## De-Speckler

### Customization Options

#### Fiber Types:

All Silica Optical Fiber  
Plastic Clad Fiber  
Round or Square Core Fiber  
RARE Motheye Available

#### Jacket Types:

Acrylate  
Nylon  
Polyimide  
Tefzel

#### Assembly Types:

Single Fiber Assemblies

#### Connector Types:

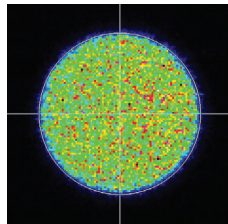
905 SMA  
906 SMA  
FC/PC  
FC/UPC  
FC/APC  
ST/PC  
ST/UPC  
ST/APC  
Cleaved Ends  
Polished Ends  
Round 2.5mm Ferrule  
Custom Connectors

#### Certifications:

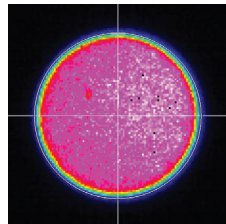
FDA Registered  
ISO 9001:2015  
ISO 13485:2016



Fiberguide's proprietary De-Speckler technology averages the modal noise within an optical fiber. This reduction in speckle is an ideal choice for fiber assemblies used in the Life Sciences, Digital Laser Projection, Interferometry, Laser Beam Homogenization, Lithography, and Metrology. For many fiber coupled applications, modal noise interferes with optimal performance. Fiberguide has developed a small, simple and integrated de-speckling system which maximizes performance and reliability in illumination, with no optical loss.

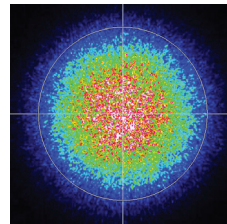


Near Field **Without**  
De-Speckler

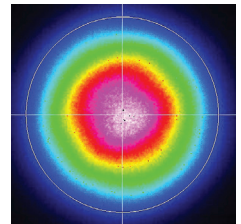


Near Field **With**  
De-Speckler

400µm Round Core Fiber - Wavelength 445nm



Far Field **Without**  
De-Speckler

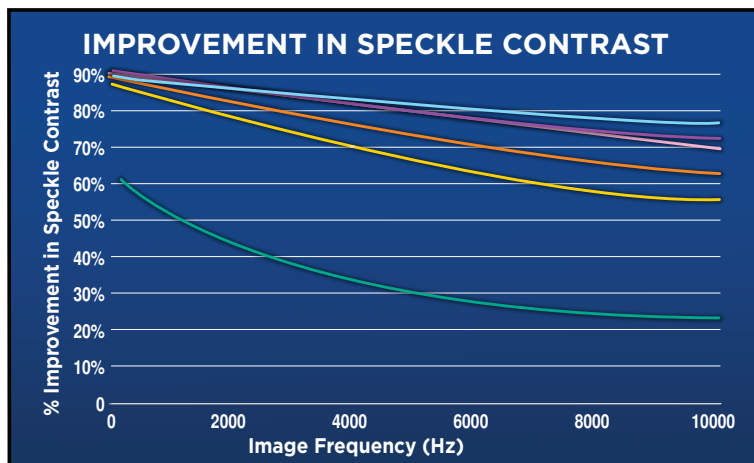


Far Field **With**  
De-Speckler

400µm Round Core Fiber - Wavelength 445nm

### SPECIFICATIONS:

Power Supply	+5 Volts
Power Consumption	< 1 Watt
Wavelength	400nm – 1550nm
Fiber Core Size	100µm – 400µm
De-Speckling Rate	Up to 10,000 Hz
CE Certified	
UKCA Certified	



Percent Speckle Contrast Improvement vs. Exposure Frequency

#### Legend

- 400/430 Round Core/Plastic Clad
- 400/600 Square Core
- 400/440 Round Core/Glass Clad
- 200 Square Core
- 200 Round Core
- 105/125 Round Core

$$C = \frac{\sigma}{\langle I \rangle}$$

C: Speckle Contrast, reported as a ratio

$\sigma$ : The standard deviation of the intensity over the radial distance

I: Average intensity of the radial distance

### CONTACT US:

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Phone: +1 (208) 454-1988 Toll Free: +1 (877) 565-0888 [www.fiberguide.com](http://www.fiberguide.com)



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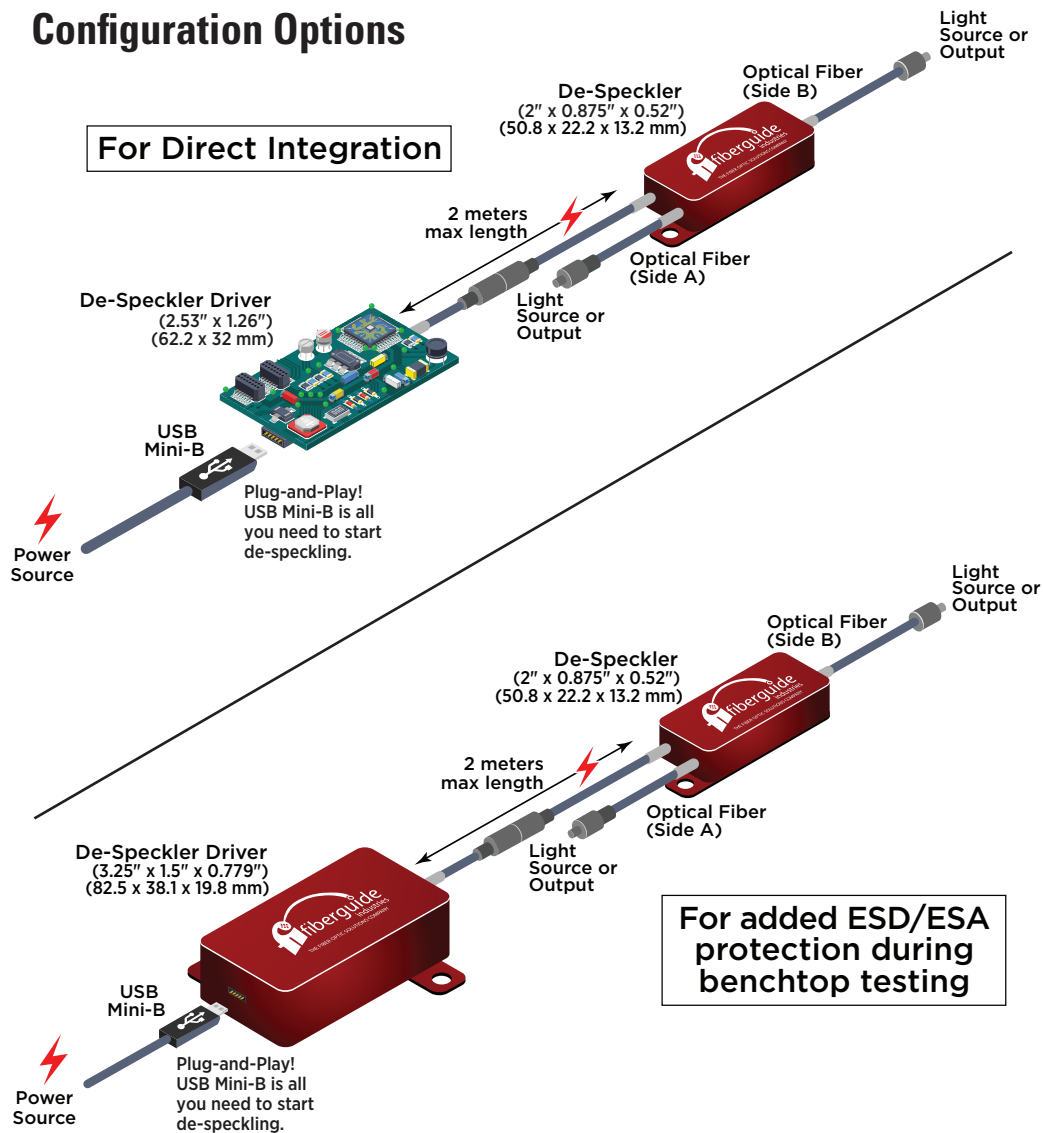
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ISO 13485:2016



### Configuration Options



### TYPICAL APPLICATIONS:

#### Life Sciences:

- Bioanalytical Instrumentation
- Flow Cytometry
- Gene Sequencing
- Microscopy
- Spectroscopy

#### Digital Laser Projection

- Interferometry
- Laser Beam Homogenizers
- Lithography
- Metrology

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