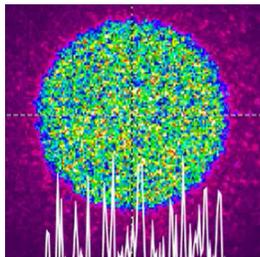


De-Speckler

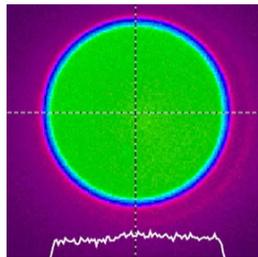
Small | Simple | Integrated



MKS's De-Speckler 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. MKS has a small, simple and integrated de-speckling system which maximizes performance and reliability in illumination, with no optical loss.

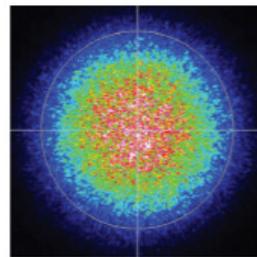


Near Field **Without**
De-Speckler

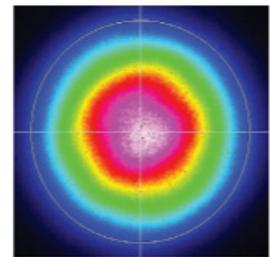


Near Field **With**
De-Speckler

400µm Round Core Fiber - Wavelength 445 nm



Far Field **Without**
De-Speckler



Far Field **With**
De-Speckler

400µm Round Core Fiber - Wavelength 445 nm

CUSTOMIZED OPTIONS:

Fiber Types

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

Connector Types:

- 905 SMA
- 906 SMA
- FC/PC
- FC/UPC
- FC/APC
- ST/PC
- ST/UPC
- ST/APC

Jacket Types

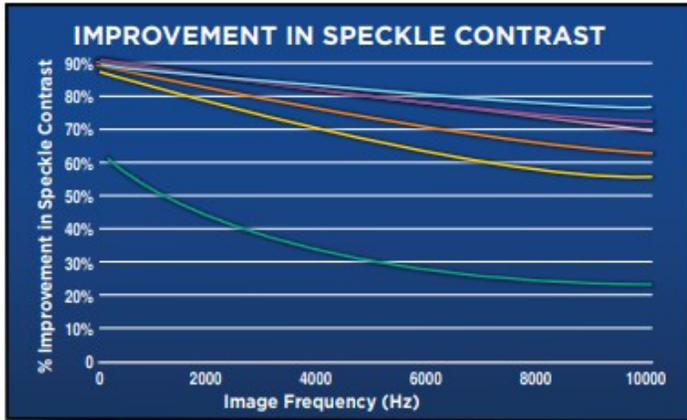
- Acrylate
- Nylon
- Polyimide
- Tefzel

Assembly Types

- Single Fiber Assemblies

Specifications

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



Percent Speckle Contrast Improvement vs. Exposure Frequency

Legend

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

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

C: Speckle Contrast, reported as a ratio

σ : The standard deviation of the intensity over the radial distance

I: Average intensity of the radial distance

CUSTOMIZED OPTIONS:

Fiber Types

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

Jacket Types

- Acrylate
- Nylon
- Polyimide
- Tefzel

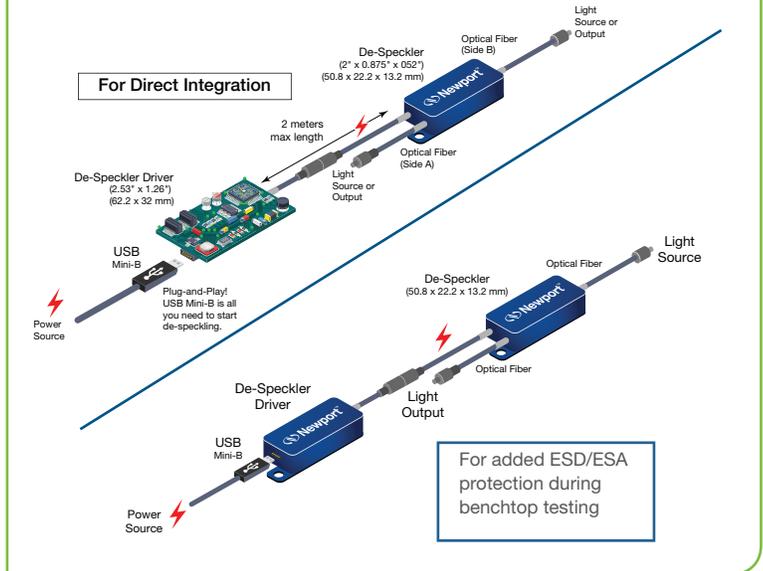
Assembly Types

- 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

Configuration Options



TYPICAL APPLICATIONS:

Life Sciences:

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

Digital Laser Projection

Interferometry

Laser Beam Homogenizers

Lithography

Metrology

Certifications:
 FDA Registered
 ISO 9001:2015
 ISO 13485:2016