



OZ Optics

shop.ozoptics.com
www.ozoptics.com



Elliot Scientific Ltd
Unit 11 Sandridge Park,
Porters Wood, St Albans,
AL3 6PH, United Kingdom
Tel: +44 (0)1582 766300
Fax: +44 (0)1582 766340
www.elliotscientific.com
sales@elliotscientific.com

IN-LINE MULTIMODE FIBER SPECKLE HOMOGENIZER

Features

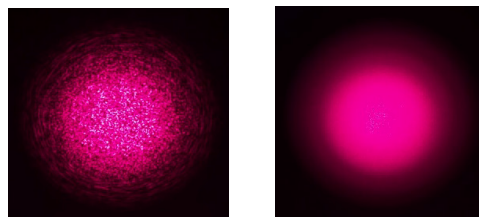
- Over 90% speckle contrast reduction
- In-Line fiber device- zero optical loss
- Plug-and-play integration
- Supports a wide range of wavelengths and optical power levels
- Low power consumption
- USB type C power input
- Compact enclosure- OEM Integration and Laboratory use



Applications

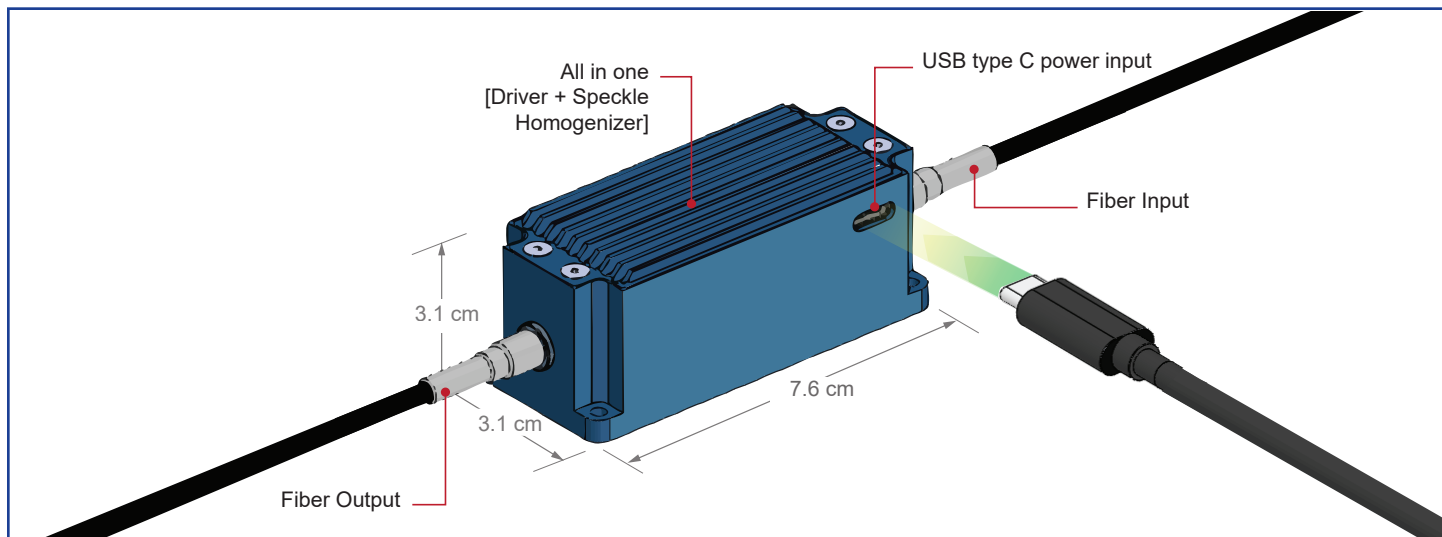
- Medical endoscopic and optical coherence imaging
- Flow cytometry and DNA sequencing
- Interferometry and Fluorescence Microscopy
- Bioanalytical instrumentation
- Machine vision and laser projection
- Speckle reduction in fiber-delivered laser systems

More than 90% speckle reduction



Product Description

This high-performance optical Speckle Homogenizer is designed to significantly reduce speckle noise in multimode fiber laser systems. Its compact, plug-and-play design integrates both the optics and driving electronics within a single enclosure, simplifying installation and system integration. By delivering high-efficiency speckle suppression in an all-in-one in-line format, it enables superior imaging quality and system reliability across a broad spectrum of applications. With unmatched versatility, it is the go-to solution for optical engineers and system designers looking to unlock the full potential of multimode fiber imaging technology.

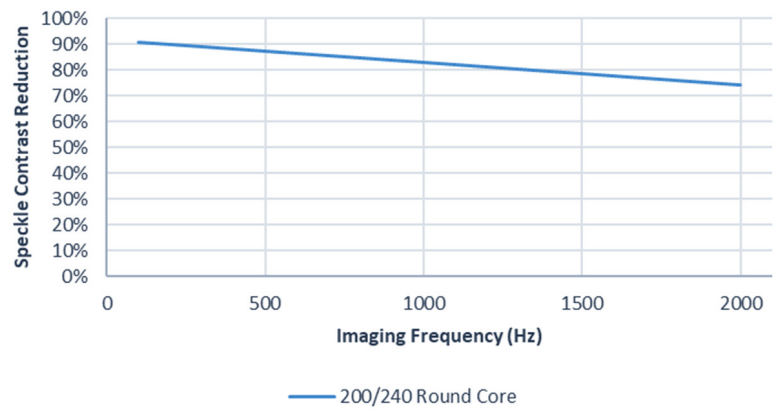


Optical and Electrical Specifications

Part number: FHOM	
Parameter	Typical Value
Wavelength	400 nm – 1550 nm
Fiber core size	100 μm – 400 μm
Fiber core type	Round, Square, Hexagonal, Octagonal
Power Input	Standard USB port C 5V DC, 0.5A
Dimensions	7.6 x 3.1 x 3.1 cm
Weight	130 g

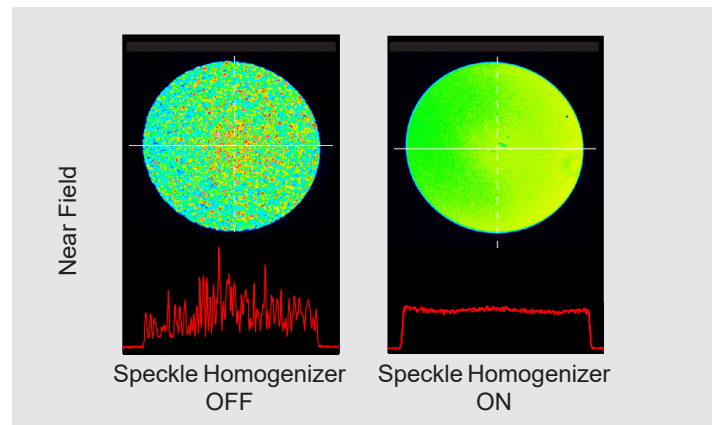
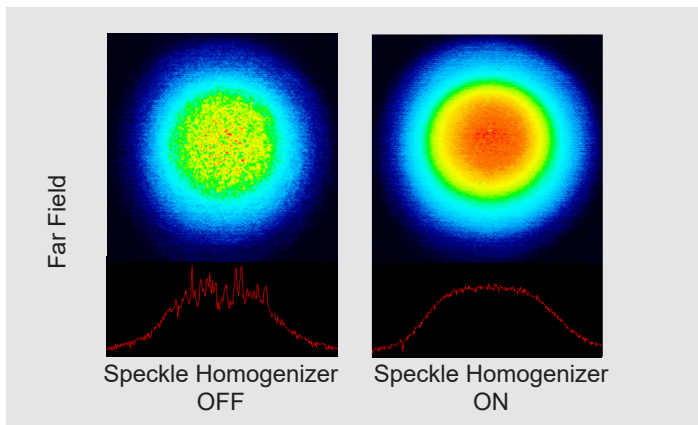
Customizable fiber and connector types
See OZ Standard Tables Data Sheet DTS0079
https://www.ozoptics.com/ALLNEW_PDF/DTS0079.pdf
or Contact Us

Improvement in Speckle Contrast



$$C(\text{Speckle Contrast}) = \frac{\sigma(\text{standard dev of intensity})}{I(\text{average intensity})}$$

200/240 μm Round Core Fiber at 635 nm Wavelength and 100Hz Frequency



Speckle Homogenizer

FHOM-11-W-a/b-F-XY-JD-L

W: For multimode fibers specify either IRVIS for visible and infrared applications (400–2000 nm), or UVVIS for ultraviolet and visible applications (200–700 nm)

a/b: = Fiber core and cladding diameters, in microns:
See tables 3 to 5 of the OZ Standard Tables Data Sheet DTS0079 for standard fiber sizes.

https://www.ozoptics.com/ALLNEW_PDF/DTS0079.pdf

E: High Power Multimode Fiber

Type Including Core Shape:

- QM = Round core
- QMS = Square core
- QMH = Hexagonal core
- QMO = Octagonal core

Customizable fiber and connector types

See OZ Standard Tables Data Sheet DTS0079.

https://www.ozoptics.com/ALLNEW_PDF/DTS0079.pdf

or Contact Us

L: Patchcord length, in meters on each arm

JD = Jacket Diameter:

- 3 = 3 mm OD PVC loose tube with Kevlar
- 3PCBK = 3 mm OD black PVC cable
- 3A = 3 mm OD armored
- 3AS = 3 mm OD stainless steel armored

See table 7 of the OZ Standard Tables Data Sheet DTS0079 for drawings.

https://www.ozoptics.com/ALLNEW_PDF/DTS0079.pdf

XY: = Input and Output Connector Types:

- 5 = SMA-905 Connector
- 3 = FC (Flat Polish) Connector

For other connector types refer to Table 6 of the OZ Standard Tables Data Sheet DTS0079.

https://www.ozoptics.com/ALLNEW_PDF/DTS0079.pdf

Example: FHOM-11-IRVIS-200/240-QM-33-3-1