PM Erbium-Doped Single-Mode Fiber

Nufern's high performance erbium-doped fiber and industry leading PM PANDA-style fiber capabilities are combined in a unique PM erbium fiber product, PM-ESF-7/125. Featuring a high erbium concentration (peak absorption 55 dB/m) and high pump conversion efficiency achieved with proprietary technology that delivers industry leading tolerances on the key spectroscopic parameters. The non-PM SM-ESF-7/125 is also available for applications that do not require a polarized signal.

Typical Applications

- PM amplifiers
- Polarized lasers
- Ultra-short pulse laser

Features & Benefits

- PANDA-style stress structure for increased birefringence — superior optical performance and uniformity
- High Er dopant concentration — enables short length devices
- High efficiency — good conversion of pump to signal power

Optical Specifications	PM-ESF-7/125	SM-ESF-7/125
Operating Wavelength	1530 – 1610 nm	N/A
Operating Wavelength (nominal)	N/A	1550 nm
Core NA	0.150	0.150
Mode Field Diameter	8.8 ± 1.0 µm @ 1550 nm 9.1 ± 1.0 µm @ 1620 nm	8.8 ± 1.0 µm @ 1550 nm 9.1 ± 1.0 µm @ 1620 nm
Cutoff	1460 ± 60 nm	1400 ± 60 nm
Normalized Cross Talk	≤ - 35.0 dB at 4 m @ 1300 nm	N/A
Core Absorption	55.0 ± 5.0 dB/m near 1530 nm	55.0 ± 5.0 dB/m near 1530 nm
Birefringence	3.5×10^{-4}	N/A
Geometrical & Mechanical Specifications		
Cladding Diameter	125.0 ± 1.5 µm	125.0 ± 1.5 µm
Core Diameter	7.0 µm	7.0 µm
Coating Diameter	245.0 ± 15.0 µm	245.0 ± 15.0 µm
Coating Concentricity	< 5.0 µm	< 5.0 µm
Core/Clad Offset	≤ 0.50 µm	≤ 0.50 µm
First Cladding Material	Depressed	N/A
Coating Material	UV Cured, Dual Acrylate	UV Cured, Dual Acrylate
Operating Temperature Range	-40 to 85 °C	-40 to 85 °C
Prooftest Level	≥ 100 kpsi (0.7 GN/m²)	≥ 100 kpsi (0.7 GN/m²)

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7 Airport Park Road, East Granby, CT 06026 • 860.408.5000 • Toll-free 866.466.0214 • Fax 860.844.0210 E-mail info @ nufern.com • www.nufern.com Nufern products are manufactured under an ISO 9001:2008 certified quality management system.

RoHS

Standard specifications and design parameters are listed above. Specifications are subject to change without notice. Other configurations such as alternative form factors, optimized cut-off and UV cured color coating may be available. Let us know how Nufern can assist with your requirements.