

PM Erbium-Doped Single-Mode Fiber



Coherent'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 – 1625 nm	1530 – 1625 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

	PM-ESF-7/125	SM-ESF-7/125
Cladding Diameter	125.0 ± 1.5 μm	125.0 ± 1.5 μm
Core Diameter	7.4 ± 0.6 μm	7.0 ± 0.2 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
Coating Material	Acrylate	Acrylate
Operating Temperature Range	-40 to 85 °C	-40 to 85 °C
Proof Test Level	≥ 100 kpsi (0.7 GN/m ²)	≥ 100 kpsi (0.7 GN/m ²)

