10/125 Erbium/Ytterbium-Doped Multimode Double Clad Fiber

Nufern's proprietary rare earth doping technology is used to deliver Er/Yb co-doped fibers with industry leading performance and reliability. These fibers feature 10 micron diameter core and a 125 micron diameter cladding with a 0.21 NA. The fiber design has been finely optimized to deliver the best performances for two distinct configurations. MM-EYDF-10/125-XP is designed to deliver ultra-high efficiencies while ensuring low threshold and high gain factors, ideal for CATV and telecom amplifiers. On the other hand, MM-EYDF-10/125-XPH is optimized to achieve tens of Watts of output power with high efficiency and suppressed 1 µm parasitic ASE, offering unmatched stability. The large core of the fiber allows for shorter fiber lengths in amplifier and laser systems to reduce the impact of non-linear effects. Utilizing Nufern's proprietary NuCOAT-FA coating technology, these fibers offer the best damp and dry heat performance available and ensure extended operating lifetime.

Typical Applications

- Laser and amplifiers at 1.5 µm (CATV and Telecom)
- Military and commercial LIDAR
- High peak power, pulsed fiber amplifiers

Features & Benefits

- Optimized XP design — High efficiency and low parasitic 1 µm ASE
- Large core — Enables shorter fiber length for high-power pulsed amplifiers
- Double clad design — High power performance and high power conversion efficiency
- NuCOAT-FA fluoroacrylate coating — Greater fiber durability in extreme operating and storage conditions
- All fiber proof tested to > 100 kpsi — Critical for ensuring long term reliability when coiling

Optical Specifications	**MM-EYDF-10/125-XP**	**MM-EYDF-10/125-XPH**
Operating Wavelength	1530 – 1625 nm	1530 – 1625 nm
Core NA	0.210	0.210
First Cladding NA (5%)	≥ 0.46	≥ 0.46
Cladding Attenuation	≤ 30.0 dB/km @ 1095 nm	≤ 30.0 dB/km @ 1095 nm
Cladding Absorption	2.90 ± 0.60 dB/m at 915 nm	2.90 ± 0.60 dB/m at 915 nm
Core Absorption	50.0 ± 20.0 dB/m near 1530 nm	100.0 ± 20.0 dB/m near 1530 nm
Geometrical & Mechanical Specifications		
Cladding Diameter (flat-to-flat)	125.0 ± 2.0 µm	125.0 ± 2.0 µm
Core Diameter	10.0 ± 1.0 µm	10.0 ± 1.0 µm
Coating Diameter	215.0 ± 5.0 µm	215.0 ± 5.0 µm
Coating Concentricity	< 5.0 µm	< 5.0 µm
Core/Clad Offset	≤ 1.00 µm	≤ 1.00 µm
Coating Material	Low Index Polymer NuCOAT-FA	Low Index Polymer NuCOAT-FA
Prooftest Level	≥ 100 kpsi (0.7 GN/m²)	≥ 100 kpsi (0.7 GN/m²)

NUFERN

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RoHS

Custom developed fiber (FUD) 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.

NU0302- 09/26/2016