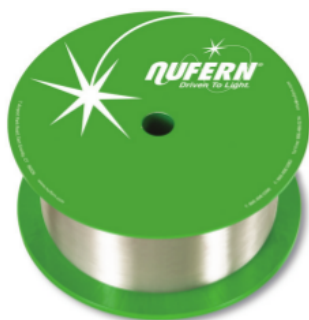


10/125 Erbium/Ytterbium-Doped Multimode Double Clad Fiber



Nuferm'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 Nuferm'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 for 20 - 30 W 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

	MM-EYDF-10/125-XP	MM-EYDF-10/125-XPH
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
Proof test Level	≥ 100 kpsi (0.7 GN/m ²)	≥ 100 kpsi (0.7 GN/m ²)



Custom developed fiber (Fiber) 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 Nuferm can assist with your requirements.



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1550-nm Single-Mode Double Clad Fibers



High power 1550 nm amplifiers based on double clad Er/Yb fibers are widely used in CATV and Telecom applications. The 1550 nm passive double clad fiber is ideal for use both as a pump and signal output fiber in combiners and as a laser delivery fiber. The high cut-off, bend insensitive design of this fiber ensures excellent signal confinement, while allowing for low splice loss to Er/Yb doped double clad fibers and industry standard SMF-28™ fiber. They are available in both non-PM design for traditional high power amplifiers and in PANDA-style PM design for high power coherent communications and frequency conversion applications.

Typical Applications

- CATV and Telecom amplifiers
- Laser delivery/fluorescence

Features & Benefits

- NuCOAT™ fluorocrylate coating – Greater fiber durability in extreme environmental operating & storage conditions
- Exceptional uniformity and core/clad concentricity — Low connectorization losses
- Bend insensitive — Survives application in tight confines
- All fiber proof tested to > 100 kpsi — Critical for ensuring long term reliability

Optical Specifications

	PM-GDF-1550	SM-GDF-1550
Operating Wavelength	1450 – 1600 nm	1450 – 1600 nm
Core NA	0.120	0.120
First Cladding NA (5%)	≥ 0.46	≥ 0.460
Mode Field Diameter	10.5 ± 0.7 μm @ 1550 nm	10.5 ± 0.7 μm @ 1550 nm
Cutoff	1440 ± 80 nm	1440 ± 80 nm
Core Attenuation	≤ 2.0 dB/km @ 1550 nm	≤ 1.00 dB/km @ 1550 nm
Cladding Attenuation	≤ 15.0 dB/km @ 1095 nm	≤ 15.0 dB/km @ 1095 nm
Birefringence	2.5 × 10 ⁻⁴	N/A

Geometrical & Mechanical Specifications

	PM-GDF-1550	SM-GDF-1550
Cladding Diameter	130.0 ± 1.0 μm	125.0 ± 1.0 μm
Core Diameter	9 μm	9 μm
Coating Diameter	245.0 ± 10.0 μm	245.0 ± 10.0 μm
Coating Concentricity	< 5.0 μm	< 5.0 μm
Core/Clad Offset	≤ 0.50 μm	≤ 0.50 μm
Proof Test Level	≥ 100 kpsi (0.7 GN/m ²)	≥ 100 kpsi (0.7 GN/m ²)



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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.