

12/130 Erbium/Ytterbium-Doped Multimode Double Clad Fibers



Nufern's proprietary rare earth doping technology is used to deliver Er:Yb co-doped fibers with industry leading performance and reliability. These fibers demonstrate high pump conversion efficiency and high power operation without rollover due to 1 μ m ASE, enabled by the double clad fiber design. The large core of the fiber allows for shorter fiber lengths in high power amplifiers to reduce the impact of non-linear effects.

Typical Applications

- LIDAR
- Eye-safe lasers and amplifiers
- High power pulsed fiber lasers and amplifiers

Features & Benefits

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

Optical Specifications

Operating Wavelength
Core NA
First Cladding NA (5%)
Cladding Attenuation
Normalized Cross Talk

MM-EYDF-12/130-HE

1530 – 1625 nm
0.200
 ≥ 0.46
 ≤ 30.0 dB/km @ 1095 nm
N/A

PM-EYDF-12/130-HE

1530 – 1625 nm
0.200
 ≥ 0.46
 ≤ 30.0 dB/km @ 1095 nm
 ≤ -25.0 dB at 10 m @
1300 nm

Cladding Absorption
Core Absorption

3.10 ± 0.50 dB/m at 915 nm
 70.0 ± 15.0 dB/m near 1530 nm

3.30 ± 0.50 dB/m at 915 nm
 75.0 ± 15.0 dB/m near 1530 nm

Geometrical & Mechanical Specifications

Cladding Diameter
Cladding Diameter (flat-to-flat)
Core Diameter
Coating Diameter
Coating Material
Proof test Level

N/A
 130.0 ± 3.0 μ m
 12.0 ± 1.5 μ m
 215.0 ± 5.0 μ m
Low Index Polymer
 ≥ 100 kpsi (0.7 GN/m²)

130.0 ± 2.0 μ m
N/A
 12.0 ± 1.5 μ m
 215.0 ± 5.0 μ m
Low Index Polymer
 ≥ 100 kpsi (0.7 GN/m²)

The passive version of each fiber is also available.



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.



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.



12/130 Precision Matched Passive 1550 nm Double Clad Fibers

Nuferm's precision matched passive double-clad fibers are available in two-versions — multimoded and PANDA-style, polarization-maintaining (PM). These fibers feature a 12 μm core diameter and a 130 μm clad diameter optimized to match Nuferm's active Er/Yb 12/130 μm fibers. This precise matching allows for the lowest splice loss improving performance for all applications including high power pulsed fiber lasers and amplifiers. They utilize the latest fiber design and NuCOAT™ coating technology to ensure excellent preservation of beam quality and extended operating life demanded by today's industrial fiber laser applications.

Typical Applications

- LIDAR
- Eye-safe lasers and amplifiers
- High power pulsed fiber lasers and amplifiers

Features & Benefits

- NuCOAT™ fluoroacrylate 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-12/130-M	MM-GDF-12/130-M
Operating Wavelength	1530 – 1800 nm	1530 – 1800 nm
Core NA	0.200	0.200
First Cladding NA (5%)	≥ 0.460	≥ 0.460
Normalized Cross Talk	≤ -25.0 dB at 10 m @ 1300 nm	N/A

Geometrical & Mechanical Specifications

	PM-GDF-12/130-M	MM-GDF-12/130-M
Cladding Diameter	130.0 ± 1.0 μm	130.0 ± 1.0 μm
Core Diameter	12.0 ± 1.5 μm	12.0 ± 1.5 μm
Coating Diameter	245.0 ± 10.0 μm	245.0 ± 10.0 μm
Coating Concentricity	< 5.0 μm	< 5.0 μm
Core/Clad Offset	≤ 1.00 μm	≤ 1.00 μm
Proof test Level	≥ 100 kpsi (0.7 GN/m ²)	≥ 100 kpsi (0.7 GN/m ²)

Coating Requirements: Low Index Polymer Coating.
 Other Requirements: Round fiber. Polarization-maintaining fiber with dual circular stress elements



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