

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 (nominal)	1550 nm	1550 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)



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.