



6/125 Precision Matched Passive Single-Mode 1550-nm Double Clad Fiber

Nufern's precision matched single-mode passive double-clad fibers are available in two-versions — PANDA-style, polarization-maintaining (PM) and non-PM. These fibers feature a 6 μm core diameter and a 125 μm clad diameter optimized to match Nufern's active Er/Yb 6/125 μm fibers. This precise matching allows for the lowest splice loss improving performance for all applications including telecom optical amplifiers at 1550 nm. 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

- Telecom amplifiers
- Laser delivery/fluorescence

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

Operating Wavelength	1530 – 1625 nm
Core NA	0.180
First Cladding NA (5%)	≥ 0.46
Mode Field Diameter	$6.8 \pm 0.8 \mu\text{m}$ @ 1550 nm
Cutoff	$1440 \pm 80 \text{ nm}$
Core Attenuation	$\leq 10.0 \text{ dB/km}$ @ 1550 nm
Cladding Attenuation	$\leq 15.0 \text{ dB/km}$ @ 1095 nm
Birefringence	1×10^{-4}

Geometrical & Mechanical Specifications

Cladding Diameter	$125.0 \pm 1.0 \mu\text{m}$
Core Diameter	$6 \mu\text{m}$
Coating Diameter	$245.0 \pm 10.0 \mu\text{m}$
Coating Concentricity	$< 5.0 \mu\text{m}$
Core/Clad Offset	$\leq 0.50 \mu\text{m}$
Proof test Level	$\geq 100 \text{ kpsi}$ (0.7 GN/m ²)

PM-GDF-6/125-M

SM-GDF-6/125-M

Operating Wavelength	1530 – 1625 nm
Core NA	0.180
First Cladding NA (5%)	≥ 0.460
Mode Field Diameter	$6.8 \pm 0.8 \mu\text{m}$ @ 1550 nm
Cutoff	$1440 \pm 80 \text{ nm}$
Core Attenuation	$\leq 6.00 \text{ dB/km}$ @ 1550 nm
Cladding Attenuation	$\leq 15.0 \text{ dB/km}$ @ 1095 nm
Birefringence	N/A

M05-A-040-A



Coating Requirements: Low Index Polymer Coating.
Other Requirements: Round Fiber

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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.

RoHS

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