



10/130 Precision Matched Passive Double Clad Fibers for 2 Micron

These Nufern precision matched passive double-clad fibers feature a 10 μm core diameter and a 130 μm clad diameter and are optimized to match Nufern's active Tm-doped 10P/130 fibers. This precise matching allows for the lowest splice loss, improving performance for all applications, including low to mid-power CW and pulsed fiber lasers and amplifiers operating in the 2 μm wavelength range. The small core, 0.15 NA fiber facilitates low bend loss and highly efficient single-mode operation while the telecom-like 130 μm cladding diameter makes handling, including cleaving and splicing, as simple as possible.

Typical Applications

- Low to mid power CW and pulsed Eye Safe 2 μm lasers & amplifiers
- Eye Safe industrial & medical lasers
- Military and commercial LIDAR

Features & Benefits

- NuCOAT_{FA}TM fluoroacrylate coating — Greater fiber durability in extreme environmental operating & storage conditions
- Robust single-mode core at ~2 μm — Easy to maintain single-mode LP01 beam through fiber and components
- PANDA-style stress structure for increased birefringence — Superior optical performance
- All fiber proof tested to > 100 kpsi — Critical for ensuring long term reliability when coiling
- Tight geometric tolerances — Excellent lot to lot uniformity

Optical Specifications

Operating Wavelength
Core NA
First Cladding NA (5%)
Cladding Attenuation
Birefringence

SM-GDF-10/130-15M

800 – 2100 nm
0.150 \pm 0.010
 \geq 0.460
 \leq 15.0 dB/km @ 1095 nm
N/A

PM-GDF-10/130-2000-M

800 – 2100 nm
0.150
 \geq 0.460
 \leq 15.0 dB/km @ 1095 nm
nominal 1.5×10^{-4}

Geometrical & Mechanical Specifications

Cladding Diameter
Core Diameter
Coating Diameter
Coating Concentricity
Core/Clad Offset
Clad Non-Circularity
Coating Material
Proof test Level

130.0 \pm 1.0 μm
10.0 \pm 1.0 μm
215.0 \pm 10.0 μm
< 5.0 μm
 \leq 0.70 μm
 \leq 0.5 %
Low Index Acrylate
 \geq 100 kpsi (0.7 GN/m²)

130.0 \pm 1.0 μm
10.0 \pm 1.0 μm
245.0 \pm 10.0 μm
< 5.0 μm
 \leq 0.70 μm
N/A
Low Index Acrylate
 \geq 100 kpsi (0.7 GN/m²)



M05-A-022-A



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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.

NU0173- 10/17/2017