

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



These Nufern precision matched passive double-clad fibers feature a 10  $\mu\text{m}$  core diameter and a 130  $\mu\text{m}$  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  $\mu\text{m}$  wavelength range. The small core, 0.15 NA fiber facilitates low bend loss and highly efficient single-mode operation while the telecom-like 130  $\mu\text{m}$  cladding diameter makes handling, including cleaving and splicing, as simple as possible.

## Typical Applications

- Low to mid power CW and pulsed Eye Safe 2  $\mu\text{m}$  lasers & amplifiers
- Eye Safe industrial & medical lasers
- Military and commercial LIDAR

## Features & Benefits

- NuCOAT<sup>FA</sup>™ fluoroacrylate coating — Greater fiber durability in extreme environmental operating & storage conditions
- Robust single-mode core at ~2  $\mu\text{m}$  — 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  $1.5 \times 10^{-4}$

## 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  $\mu\text{m}$   
10.0  $\pm$  1.0  $\mu\text{m}$   
215.0  $\pm$  10.0  $\mu\text{m}$   
 $<$  5.0  $\mu\text{m}$   
 $\leq$  0.70  $\mu\text{m}$   
 $\leq$  0.5 %  
Low Index Acrylate  
 $\geq$  100 kpsi (0.7 GN/m<sup>2</sup>)

130.0  $\pm$  1.0  $\mu\text{m}$   
10.0  $\pm$  1.0  $\mu\text{m}$   
245.0  $\pm$  10.0  $\mu\text{m}$   
 $<$  5.0  $\mu\text{m}$   
 $\leq$  0.70  $\mu\text{m}$   
N/A  
Low Index Acrylate  
 $\geq$  100 kpsi (0.7 GN/m<sup>2</sup>)



M05-A-Q50-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.

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