



# 10/125 & 10/130 Precision Matched Passive LMA Double Clad Fibers

Nufern's large mode area (LMA) and Polarization Maintaining LMA (PLMA) passive double clad fibers are ideally suited for applications spanning military, industrial and medical including linearly polarized fiber lasers and amplifiers. These fibers feature a 10 micron diameter core and 125 (PLMA) or 130 (LMA) micron diameter clad size with a low NA (0.075) core. They are precision matched to their active Yb-doped 10/130 LMA and PLMA matched counterparts to ensure excellent splice compatibility and low loss. As with all Nufern standard Large Mode Area (LMA) fibers, these fibers are proof-tested to 100 kpsi, an industry requirement for long term reliability. 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. These precision matched fibers are available in both non-PM and PANDA-style PM fibers.

### Typical Applications

- Pulsed fiber lasers and amplifiers
- Material processing
- LIDAR
- Non-linear optics / frequency doubling

### Features & Benefits

- NuCOAT™ fluoroacrylate coating — Greater fiber durability in extreme environmental operating & storage conditions
- LMA core design — Useful for transmitting high CW powers
- "Few" moded core design — Easy to maintain single mode LP01 beam through fiber & components
- PANDA-style stress structure for increased birefringence — Superior optical performance and uniformity
- 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%)  
Core Attenuation  
Cladding Attenuation  
Birefringence

#### PLMA-GDF-10/125-M

1060 – 1600 nm  
0.075 ± 0.005  
≥ 0.460  
≤ 40.00 dB/km @ 1300 nm  
≤ 20.00 dB/km @ 1200 nm  
≤ 15.0 dB/km @ 1095 nm  
nominal  $3 \times 10^{-4}$

#### LMA-GDF-10/130-M

1060 – 1600 nm  
0.075 ± 0.005  
≥ 0.46  
≤ 40.0 dB/km @ 1300 nm  
≤ 20.0 dB/km @ 1200 nm  
≤ 15.0 dB/km @ 1095 nm  
N/A

### Geometrical & Mechanical Specifications

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

125.0 ± 1.0 μm  
11.0 ± 1.0 μm  
245.0 ± 10.0 μm  
< 5.0 μm  
≤ 0.70 μm  
N/A  
≥ 100 kpsi (0.7 GN/m<sup>2</sup>)

130.0 ± 1.0 μm  
11.0 ± 1.0 μm  
245.0 ± 10.0 μm  
< 5.0 μm  
≤ 0.70 μm  
≤ 0.5 %  
≥ 100 kpsi (0.7 GN/m<sup>2</sup>)



M05-A-018-A

These precision matched fibers are included in our precision matched sets - see PLMA-YDF-10/125-M and LMA YDF-10/130-M



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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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