

# 10/125 Precision Matched Passive LMA Fibers



Coherent | Nufern's large mode area (LMA) passive single and 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 micron diameter clad size with a low NA core. They are precision matched to their LMA Yb-doped 10/125 matched counterparts to ensure excellent splice compatibility and low loss. As with all Coherent | Nufern standard LMA fibers, these fibers are proof-tested to 100 kpsi, an industry requirement for long term reliability. They utilize the latest fiber design and the double clad fibers features NuCOAT-FA coating technology to ensure excellent preservation of beam quality and extended operating life demanded by today's industrial fiber laser applications.

## Typical Applications

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

## Features & Benefits

- NuCOAT-FA fluoroacrylate coating — Greater fiber durability in extreme environmental operating & storage conditions
- Bend insensitive — Survives application in tight confines
- Optimized LMA core design — Easy to maintain single mode LP01 beam through fiber & components at high power
- Precision Matched (M) — Providing low splice loss
- All fiber proof tested to > 100 kpsi — Critical for ensuring long term reliability

## Optical Specifications

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

### LMA-GSF-10/125-M

1015 – 1115 nm  
0.075 ± 0.005  
N/A  
≤ 40.0 dB/km @ 1300 nm  
≤ 20.0 dB/km @ 1200 nm  
N/A

### LMA-GDF-10/125-M

1015 – 1115 nm  
0.080 ± 0.005  
≥ 0.46  
≤ 40.0 dB/km @ 1300 nm  
≤ 20.0 dB/km @ 1200 nm  
≤ 15 dB/km @ 1095 nm

## Geometrical & Mechanical Specifications

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

125.0 ± 1.0 μm  
11.0 ± 1.0 μm  
245.0 ± 10.0 μm  
< 5.0 μm  
≤ 0.70 μm  
≤ 0.5 %  
Acrylate  
≥ 100 kpsi (0.7 GN/m<sup>2</sup>)

125.0 ± 1.0 μm  
10.5 ± 1.0 μm  
245.0 ± 10.0 μm  
< 5.0 μm  
≤ 0.70 μm  
≤ 0.5 %  
Low Index Acrylate  
≥ 100 kpsi (0.7 GN/m<sup>2</sup>)



Coating Non-Circularity < 2%  
Designed to work with 10/125 LMA Yb-doped active fibers, especially LMA-YDF-10/125-9M



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.



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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