

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

	LMA-GSF-10/125-M	LMA-GDF-10/125-M
Operating Wavelength	1015 – 1115 nm	1015 – 1115 nm
Core NA	0.075 ± 0.005	0.080 ± 0.005
First Cladding NA (5%)	N/A	≥ 0.46
Core Attenuation	≤ 40.0 dB/km @ 1300 nm ≤ 20.0 dB/km @ 1200 nm	≤ 40.0 dB/km @ 1300 nm ≤ 20.0 dB/km @ 1200 nm
Cladding Attenuation	N/A	≤ 15 dB/km @ 1095 nm

Geometrical & Mechanical Specifications

	LMA-GSF-10/125-M	LMA-GDF-10/125-M
Cladding Diameter	125.0 ± 1.0 μm	125.0 ± 1.0 μm
Core Diameter	11.0 ± 1.0 μm	10.5 ± 1.0 μm
Coating Diameter	245.0 ± 10.0 μm	245.0 ± 10.0 μm
Coating Concentricity	< 5.0 μm	< 5.0 μm
Core/Clad Offset	≤ 0.70 μm	≤ 0.70 μm
Clad Non-Circularity	≤ 0.5 %	≤ 0.5 %
Coating Material	Acrylate	Low Index Acrylate
Proof test Level	≥ 100 kpsi (0.7 GN/m ²)	≥ 100 kpsi (0.7 GN/m ²)

M05-A-019-A



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



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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.