

# 20/130 Passive LMA Double Clad Fiber



Nuferm's passive series of Large Mode Area (LMA) double clad fibers are ideal for high power monolithic fiber lasers and amplifiers. These passive fibers are based on a 20 micron diameter core and 130 micron diameter clad size with a low NA (0.08) core and are designed to work well with the active Yb-doped 20/130 LMA fibers. These fibers utilize the latest fiber design and NuCOAT™ coating technology to ensure excellent preservation of beam quality and extended operating life at the high power levels demanded by today's industrial fiber laser applications. These 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

- Designed for compatibility with 20/130 active fibers
- NuCOAT™ fluoroacrylate coating — Greater fiber durability in extreme environmental operating & storage conditions
- Optimized LMA core design — Easy to maintain single mode LP01 beam through fiber & components at high power
- 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-20/130

1060 – 1600 nm  
0.080 ± 0.005  
≥ 0.46  
N/A  
  
≤ 15.0 dB/km @ 1095 nm  
nominal  $2 \times 10^{-4}$

#### LMA-GDF-20/130-M

1060 – 1600 nm  
0.080 ± 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

130.0 ± 1.0 μm  
20.0 ± 2.0 μm  
245.0 ± 10.0 μm  
< 5.0 μm  
N/A  
N/A  
≥ 100 kpsi (0.7 GN/m<sup>2</sup>)

130.0 ± 1.0 μm  
20.0 ± 1.5 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-020-A

Designed to work with 20/130 LMA Yb-doped active fibers.



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Standard specifications and design parameters are listed above. 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 Nuferm can assist with your requirements.

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