



# 20/400 Precision Matched Passive LMA Double Clad Fibers

Coherent | Nufern's Large Mode Area (LMA) passive double clad fibers are ideal for high power fiber lasers and amplifiers used in military, industrial, and medical applications. These fibers feature a 20 micron diameter core and 400 micron diameter clad size with a low NA (0.065) core. They are precision matched to their active counterpart, LMA-YDF-20/400-HP-M, to ensure excellent splice compatability and low loss. As with all Coherent | 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 to ensure excellent preservation of beam quality. The new NuCOAT-FA-HP high performance coating technology extends the operating life at higher power levels demanded by today's industrial fiber laser applications.

## Typical Applications

- High power fiber lasers
- CW and pulsed amplifiers
- Military, industrial and medical
- Fiber Bragg Gratings

## Features & Benefits

- NuCOAT-FA-HP high performance fluoroacrylate coating — Greater fiber durability at the highest powers and 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
- 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%)  
Mode Field Diameter  
Core Attenuation  
Cladding Attenuation

### LMA-GDF-20/400-HP-M 1364050

1015 – 1115 nm  
0.065 ± 0.005  
≥ 0.46  
N/A  
≤ 12.0 dB/km @ 1300 nm  
≤ 8.0 dB/km @ 1200 nm  
≤ 15.0 dB/km @ 1095 nm

### LMA-GDF-20/400-HP-M+ 1364049

1015 – 1115 nm  
0.065 ± 0.005  
≥ 0.46  
16.7 ± 1.0 μm @ 1060 nm  
≤ 12.0 dB/km @ 1300 nm  
≤ 8.0 dB/km @ 1200 nm  
≤ 15.0 dB/km @ 1095 nm

## Geometrical & Mechanical Specifications

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

395.0 ± 5.0 μm  
20.0 ± 1.5 μm  
550.0 ± 15.0 μm  
≤ 2.00 μm  
≤ 0.50 %  
Low Index Acrylate  
≥ 100 kpsi (0.7 GN/m<sup>2</sup>)

395.0 ± 3.0 μm  
20.0 ± 1.5 μm  
550.0 ± 15.0 μm  
≤ 1.20 μm  
≤ 0.50 %  
Low Index Acrylate  
≥ 100 kpsi (0.7 GN/m<sup>2</sup>)



Precision matched with LMA-YDF-20/400-HP-M  
It is recommended that fibers with NuCOAT-FA-HP and NuCOAT-FA coatings are not used together.

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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.

