

20/400 Precision Matched Passive LMA Double Clad Fibers



Coherent | Coherent'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 compatibility and low loss. As with all Coherent | Coherent 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/m²)

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/m²)



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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www.coherent.com ; www.shop.coherent.com • Coherent 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 Coherent can assist with your requirements.