

20/400 Precision Matched Active LMA Double Clad Fiber



Coherent | Nufern's matched series of Large Mode Area (LMA) double clad fibers are ideal for high power monolithic fiber lasers and amplifiers. This matched fiber series is based on a 20 micron diameter core and 400 micron diameter clad size with a low NA (0.065) core and consists of Yb-doped fiber and passive beam delivery fibers all made to the highest tolerances in the industry. This fiber utilizes Gen 8 glass composition to ensure excellent preservation of beam quality. The new NuCOAT-FA-HP high performance coating technology extends the operating life at the higher power levels demanded by today's industrial fiber laser applications.

Typical Applications

- Monolithic high power lasers & amplifiers
- LMA fiber couplers & pump combiners
- High power pump & signal pigtails
- Military, industrial and medical

Features & Benefits

- Matched fiber series – Ensures splice compatibility across the 20/400 matched series of fibers
- NuCOAT-FA-HP high performance coating — Greater fiber durability at higher powers and in extreme environmental operating & storage conditions
- State of the art Yb-doped glass — Useful for generating high CW powers
- 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
Cladding Absorption
Slope Efficiency

LMA-YDF-20/400-HP-M 1364048

1015 – 1115 nm
0.065 ± 0.005
≥ 0.46
≤ 30.0 dB/km @ 1300 nm
≤ 15.0 dB/km @ 1200 nm
≤ 15.0 dB/km @ 1095 nm
0.40 ± 0.05 dB/m at 915 nm
> 70.0% @ 915 nm

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Geometrical & Mechanical Specifications

Cladding Diameter (flat-to-flat)
Core Diameter
Coating Diameter
Core/Clad Offset
Coating Material
Proof test Level

400.0 ± 10.0 μm
20.0 ± 1.5 μm
550.0 ± 15.0 μm
≤ 2.00 μm
Low Index Acrylate
≥ 100 kpsi (0.7 GN/m²)

400.0 ± 10.0 μm
20.0 ± 1.5 μm
550.0 ± 15.0 μm
≤ 2.00 μm
N/A
≥ 100 kpsi (0.7 GN/m²)

Precision matched with LMA-GDF-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.

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