

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

1015 – 1115 nm

Core NA

0.065 ± 0.005

First Cladding NA (5%)

≥ 0.46

Core Attenuation

≤ 30.0 dB/km @ 1300 nm

≤ 15.0 dB/km @ 1200 nm

Cladding Attenuation

≤ 15.0 dB/km @ 1095 nm

Cladding Absorption

0.40 ± 0.05 dB/m at 915 nm

Slope Efficiency

> 70.0% @ 915 nm

Geometrical & Mechanical Specifications

Cladding Diameter (flat-to-flat)

400.0 ± 10.0 μm

Core Diameter

20.0 ± 1.5 μm

Coating Diameter

550.0 ± 15.0 μm

Core/Clad Offset

≤ 2.00 μm

Coating Material

Low Index Acrylate

Proof test Level

≥ 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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