

EyeSafe 25 Micron Core Holmium-Doped LMA Double Clad Fiber



True LMA fiber featuring a unique low NA (<math>< 0.1</math>) high concentration Ho-doped core design. The Ho-doped fiber can be pumped by a Tm-doped fiber laser at ~1950-nm and can achieve 60% efficiency. The high NA (0.46) large pump cladding waveguide allows for efficient coupling of high pump powers. The large core diameter (25 μm) maintains a large mode field diameter and short device length, thereby minimizing non-linear effects such as SBS and SRS.

Typical Applications

- High power CW and pulsed
- EyeSafe (~2 μm) lasers and amplifiers
- Military and commercial LIDAR
- ~2 μm output TEM₀₀ fiber lasers for pumping solid state crystal lasers

Features & Benefits

- Unique low NA Ho-doped core design — Robust single-mode beam quality
- NuCOAT™ fluoroacrylate coating — Greater fiber durability in extreme environmental operating & storage conditions
- High pump absorption — Short fiber length, efficient lasing in the ~2 μm window

Optical Specifications

| | |
|------------------------|-----------------------------|
| Operating Wavelength | 2100 – 2200 nm |
| Core NA | 0.080 ± 0.010 |
| First Cladding NA (5%) | ≥ 0.46 |
| Cladding Attenuation | ≤ 15.0 dB/km @ 810 nm |
| Cladding Absorption | 0.30 ± 0.20 dB/m at 1150 nm |

LMA-HDF-25/250

Geometrical & Mechanical Specifications

| | |
|----------------------------------|-------------------------------------|
| Cladding Diameter (flat-to-flat) | 250.0 ± 8.0 μm |
| Core Diameter | 25.0 ± 2.0 μm |
| Coating Diameter | 395.0 ± 15.0 μm |
| Core/Clad Offset | ≤ 2.00 μm |
| Proof test Level | ≥ 100 kpsi (0.7 GN/m ²) |



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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.

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