

EyeSafe 40 Micron Core Holmium-Doped LMA Double Clad Fiber



True LMA fiber featuring a unique low NA (< 0.1) 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 (40 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-40/400

Geometrical & Mechanical Specifications

Cladding Diameter (flat-to-flat)	400.0 ± 10.0 μm
Core Diameter	40.0 ± 4.0 μm
Coating Diameter	550.0 ± 15.0 μm
Core/Clad Offset	≤ 2.00 μm
Proof test Level	≥ 100 kpsi (0.7 GN/m ²)



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Standard specifications and design parameters are listed above. 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.