

EyeSafe 40 Micron Core Holmium-Doped LMA All-Glass 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 Ho-doped fiber features a unique all-glass cladding design with a 40 μm diameter Ho-doped core, a glass inner cladding diameter of 250 μm , a 320 μm 0.22NA index depressed outer glass cladding for the pump radiation and a fluoroacrylate outer polymer jacket (40/250/320/400).

Typical Applications

- High power CW and pulsed EyeSafe ~2 μm lasers/amplifiers
- EyeSafe industrial & medical lasers
- Military and commercial LIDAR

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
- Unique all-glass double clad design — For achieving higher output powers

Optical Specifications

Operating Wavelength	2100 – 2200 nm
Core NA	0.080 \pm 0.010
Second Cladding NA (5%)	\geq 0.46
Cladding Absorption	0.55 \pm 0.20 dB/m at 1150 nm

LMA-HTF-40/250/400

Geometrical & Mechanical Specifications

First Cladding Diameter (flat-to-flat)	250.0 \pm 10.0 μm
Second Cladding Diameter	320 \pm 15 μm
Third Cladding Diameter	400 \pm 10 μm
Core Diameter	40.0 \pm 4.0 μm
Coating Diameter	550.0 \pm 15.0 μm
Proof test Level	\geq 100 kpsi (0.7 GN/m ²)



Coating Requirements: Low index Coating.

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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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