

EyeSafe 10 Micron Core Holmium-Doped SM Double Clad Fiber



SM fiber featuring a 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, but with its small core size this fiber can easily be core-pumped as well. This fiber features a single mode large core/cladding ratio with a low NA and is ideally suited for both CW and pulsed laser applications.

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
- Fiber designed for either core-pumping or clad-pumping.

Optical Specifications

Operating Wavelength	2100 – 2200 nm
Core NA	0.150 ± 0.020
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

SM-HDF-10/130

Geometrical & Mechanical Specifications

Cladding Diameter (flat-to-flat)	130.0 ± 2.0 μm
Core Diameter	10.0 ± 1.0 μm
Coating Diameter	220.0 ± 10.0 μm
Coating Concentricity	< 5.0 μm
Core/Clad Offset	≤ 0.50 μm
Proof-test Level	≥ 100 kpsi (0.7 GN/m ²)



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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 Coherent can assist with your requirements.

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