

10/130 Ytterbium-Doped LMA Double Clad Fiber



Featuring the latest Gen VIII glass composition, Nufern's large mode area (LMA) and PM-LMA Ytterbium-doped double clad fibers are ideally suited for applications spanning military, industrial and medical including linearly polarized fiber lasers and amplifiers. LMA Yb-doped fibers enable efficient, compact, diode pumped fiber sources that are an attractive alternative to traditional solid-state lasers. 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

- Pulsed fiber lasers and amplifiers
- Material processing
- LIDAR
- Non-linear optics / frequency doubling

Features & Benefits

- NuCOAT fluoroacrylate coating — Greater fiber durability in extreme environmental operating & storage conditions
- LMA core design and short amplifier length — Useful for generating high peak powers
- Easy to maintain single mode LP01 beam through fiber & components
- PANDA-style stress structure for increased birefringence — Superior optical performance and uniformity
- All fiber proof tested to > 100 kpsi — Critical for ensuring long term reliability when coiling

Optical Specifications

	PLMA-YDF-10/125-VIII	LMA-YDF-10/130-VIII
Operating Wavelength	1060 – 1115 nm	1060 – 1115 nm
Core NA	0.075	0.075
First Cladding NA (5%)	≥ 0.460	≥ 0.46
Cladding Attenuation	≤ 15.0 dB/km @ 1095 nm	≤ 15.0 dB/km @ 1095 nm
Cladding Absorption	1.60 ± 0.20 dB/m at 915 nm 4.80 dB/m near 976 nm	1.30 ± 0.20 dB/m at 915 nm 3.90 dB/m near 975 nm
Birefringence	nominal 3×10^{-4}	N/A

Geometrical & Mechanical Specifications

	PLMA-YDF-10/125-VIII	LMA-YDF-10/130-VIII
Cladding Diameter	125.0 ± 2.0 μm	N/A
Cladding Diameter (flat-to-flat)	N/A	130.0 ± 3.0 μm
Core Diameter	11.0 ± 1.0 μm	11.0 ± 1.0 μm
Coating Diameter	245.0 ± 15.0 μm	245.0 ± 15.0 μm
Core/Clad Offset	≤ 1.00 μm	≤ 1.00 μm
Coating Material	Low Index Polymer	Low Index Polymer
Proof test Level	≥ 100 kpsi (0.7 GN/m ²)	≥ 100 kpsi (0.7 GN/m ²)

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The precision matched fiber sets are also available - see PLMA-YDF-10/125-M; LMA YDF-10/130-M; PLMA-GDF-10/125-M and LMA-GDF-10/130-M



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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.

