

30/250 Ytterbium-Doped LMA Double Clad Fibers



Coherent's 30/250 Ytterbium-doped double clad Fiber is specifically designed for short pulse amplification where fiber length is a critical design factor because of very high peak powers. The high absorption enables very short fiber amplifier lengths without sacrificing efficiency. Short pulse fiber amplifiers can be considered low-cost replacements for Nd:YAG lasers used in materials processing, LIDAR and range finding applications. This 30/250 Large Mode Area fiber is available in both a standard and a PANDA-style PM format. Coherent also offers alternate versions of these fibers with higher Yb dopant concentration.

Typical Applications

- Short pulse fiber amplifiers & lasers
- Materials processing
- LIDAR
- Range finding
- CW fiber amplifiers and lasers

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
- “Few” moded core design — 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-30/250-VIII	LMA-YDF-30/250-VIII
Operating Wavelength	1060 – 1115 nm	1060 – 1115 nm
Core NA	0.060 ± 0.010	0.060 ± 0.010
First Cladding NA (5%)	≥ 0.46	≥ 0.46
Cladding Attenuation	≤ 15.0 dB/km @ 1095 nm	N/A
Cladding Absorption	2.00 ± 0.30 dB/m at 915 nm 6.00 dB/m near 975 nm	1.70 ± 0.30 dB/m at 915 nm 5.10 dB/m near 975 nm
Birefringence	1.5 × 10 ⁻⁴	N/A

Geometrical & Mechanical Specifications

	PLMA-YDF-30/250-VIII	LMA-YDF-30/250-VIII
Cladding Diameter	250.0 ± 8.0 μm	N/A
Cladding Diameter (flat-to-flat)	N/A	250.0 ± 8.0 μm
Core Diameter	30.0 ± 2.5 μm	30.0 ± 2.5 μm
Coating Diameter	395.0 ± 15.0 μm	395.0 ± 15.0 μm
First Cladding Material	Low Index Polymer	Low Index Polymer
Proof test Level	≥ 100 kpsi (0.7 GN/m ²)	≥ 100 kpsi (0.7 GN/m ²)

The passive version of each fiber is also available - see PLMA-GDF-30/250 and LMA-GDF-30/250



Nufern • 7 Airport Park Road, East Granby, CT 06026 • 860.408.5000 • Toll-free 866.466.0214 • Fax 860.844.0210 • Email: tech.sales@coherent.com
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.