

High Absorption 30/250 Ytterbium-Doped LMA Double Clad Fiber



Coherent high absorption 30/250 Ytterbium-doped double clad fibers based on Gen. VIII glass composition, offers a higher Yb dopant concentration than our original 30/250 LMA fibers. These fibers are 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 high absorption 30/250 Large Mode Area fiber is available in both a standard and a PANDA-style PM format.

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
- Higher Yb dopant concentration — Higher absorption & superior long-term performance

Optical Specifications

	PLMA-YDF-30/250-HI-8	LMA-YDF-30/250-HI-8
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	2.40 ± 0.20 dB/m at 915 nm 7.20 dB/m near 975 nm	2.10 ± 0.20 dB/m at 915 nm 6.30 dB/m near 975 nm
Birefringence	1.5 × 10 ⁻⁴	N/A

Geometrical & Mechanical Specifications

	PLMA-YDF-30/250-HI-8	LMA-YDF-30/250-HI-8
Cladding Diameter	250.0 ± 10.0 μm	N/A
Cladding Diameter (flat-to-flat)	N/A	250.0 ± 10.0 μm
Core Diameter	30.0 ± 2.5 μm	30.0 ± 2.5 μm
Coating Diameter	400.0 ± 20.0 μm	400.0 ± 20.0 μm
Coating Material	Low Index Acrylate	Low Index Acrylate
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



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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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