

# 30/400 Ytterbium-Doped LMA Double Clad Fibers



Coherent's 30/400 Ytterbium-doped double clad fiber is designed to combine the features of large 30  $\mu\text{m}$  core diameter for generating high pulse energy together with a large 400  $\mu\text{m}$  cladding optimized for high average powers, while still delivering good beam quality through the adoption of LMA fiber design. Available with latest generation of glass technology, the Gen. VIII 30/400-YDF fiber is available in two versions —standard and PANDA-style PM.

## Typical Applications

- Marking
- Welding
- Cutting

## Features & Benefits

- NuCOAT™ fluoroacrylate coating — Greater fiber durability in extreme environmental operating & storage conditions
- LMA core design — Operates at highest CW powers possible and delivers good beam quality
- “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-30/400-VIII	LMA-YDF-30/400-VIII
Operating Wavelength	1060 – 1115 nm	1060 – 1115 nm
Core NA	0.060 $\pm$ 0.010	0.060 $\pm$ 0.010
First Cladding NA (5%)	$\geq$ 0.46	$\geq$ 0.46
Cladding Attenuation	$\leq$ 15.0 dB/km @ 1095 nm	$\leq$ 15.0 dB/km @ 1095 nm
Cladding Absorption	0.90 $\pm$ 0.10 dB/m at 915 nm 2.70 dB/m near 975 nm	0.65 $\pm$ 0.10 dB/m at 915 nm 2.00 dB/m near 975 nm
Birefringence	nominal $3 \times 10^{-4}$	N/A

## Geometrical & Mechanical Specifications

	PLMA-YDF-30/400-VIII	LMA-YDF-30/400-VIII
Cladding Diameter	400.0 $\pm$ 15.0 $\mu\text{m}$	N/A
Cladding Diameter (flat-to-flat)	N/A	400.0 $\pm$ 15.0 $\mu\text{m}$
Core Diameter	30.0 $\pm$ 3.0 $\mu\text{m}$	30.0 $\pm$ 3.0 $\mu\text{m}$
Coating Diameter	550.0 $\pm$ 20.0 $\mu\text{m}$	500.0 $\pm$ 20.0 $\mu\text{m}$
Coating Material	Low Index Acrylate	Low Index Acrylate
Proof test Level	$\geq$ 100 kpsi (0.7 GN/m <sup>2</sup> )	$\geq$ 100 kpsi (0.7 GN/m <sup>2</sup> )



The passive version of each fiber is also available - see PLMA-GDF-30/400 and LMA-GDF-30/400

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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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