



25/400 Ytterbium-Doped LMA Double Clad Fibers

Nufern's 25/400 Ytterbium-doped double clad fiber is ideally suited for high average power pulsed and narrow linewidth CW fiber amplifier applications. Based on a "few-moded" waveguide structure, this fiber is incorporated into components and monolithic designs where maintaining beam quality can be more difficult. In addition to the standard active fiber, Nufern can supply a matching passive support fiber for component and pigtail development efforts. As with all Nufern standard Large Mode Area (LMA) fibers, these fibers are proof-tested to 100 kpsi, an industry requirement for long term reliability when coiling for mode filtering.

Typical Applications

- High peak power amplifiers
- LIDAR
- Material processing
- Non-linear optics/frequency doubling

Features & Benefits

- 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

Operating Wavelength (nominal)	1060– 1115 nm
Cladding Absorption @ 915 nm	0.80 ± 0.10 dB/m
Cladding Absorption @ 975 nm (nominal)	2.40 dB/m
Core Numerical Aperture	0.06 ± 0.01
Cladding Numerical Aperture (5%l)	≥ 0.46
Birefringence (nominal)	3.5×10^{-4}

Geometrical & Mechanical Specifications

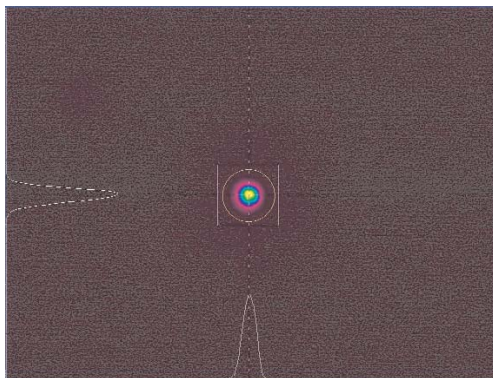
Core Diameter	25.0 ± 2.5 μm
Clad Diameter	400 ± 15 μm
Coating Diameter	550 ± 20 μm
Core Non-Circularity	NA
Outer Cladding Material	Low Index Polymer
Proof Test Level (radius bend method)	≥ 100 kpsi (0.7 GN/m^2)

PLMA-YDF-25/400-VIII

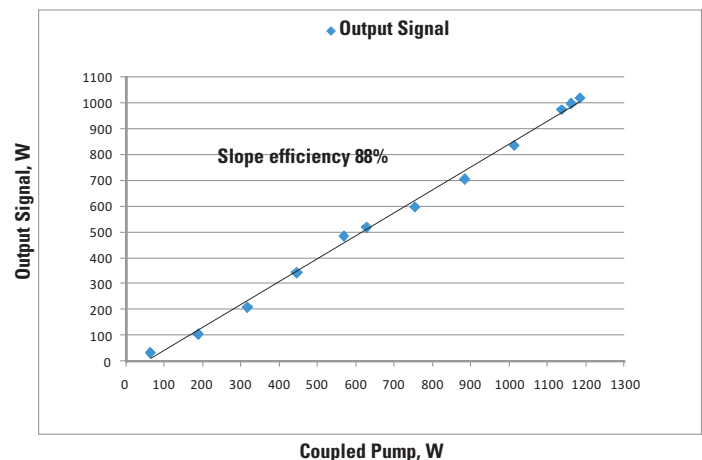
LMA-YDF-25/400-VIII

Operating Wavelength (nominal)	1060– 1115 nm
Cladding Absorption @ 915 nm	0.60 ± 0.10 dB/m
Cladding Absorption @ 975 nm (nominal)	1.80 dB/m
Core Numerical Aperture	0.06 ± 0.01
Cladding Numerical Aperture (5%l)	≥ 0.46
Birefringence (nominal)	NA
Core Diameter	25.0 ± 1.5 μm
Clad Diameter	400 ± 15 μm
Coating Diameter	500 ± 20 μm
Core Non-Circularity	$\leq 15\%$
Outer Cladding Material	Low Index Polymer
Proof Test Level (radius bend method)	≥ 100 kpsi (0.7 GN/m^2)

Measured Beam Quality at 1kW, M2=1.15



1kW LMA-25/400 Fiber Amplifier



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Nufern products are manufactured under an ISO 9001:2000 certified quality management system.

Standard specifications and design parameters are listed above. 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.

