



10/125 NuGEN9 Precision Matched Ytterbium-Doped LMA Double Clad Fiber

NuGEN9 active fibers offer the most advanced glass composition and fiber design. This fiber is a Yb-doped Large Mode Area (LMA) active double clad fiber featuring a 10 micron diameter core and 125 micron clad diameter with a low NA (0.08) core. This fiber is ideally suited for applications spanning military, industrial and medical applications. NuGEN9 fibers feature an optimized glass composition enabling higher absorption with superior photodarkening performance. These fibers are proof-tested to 100 kpsi, an industry requirement for long term reliability. NuGEN9 fibers are exclusively offered with Nufern's proprietary NuCOAT-FA coating technology with the best wet and dry heat performance available, ensuring excellent preservation of beam quality and extended operating life. The fiber is precision matched to its passive counterpart ensuring excellent splice compatibility and low loss.

Typical Applications

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

Features & Benefits

- NuGEN9 fiber design — Providing higher absorption with superior reliability & photodarkening performance
- NuCOAT-FA fluoroacrylate coating — Excellent wet and dry heat performance for extended life in extreme 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
- All fiber proof tested to > 100 kpsi — Critical for ensuring long term reliability when coiling

Optical Specifications

Operating Wavelength	1015 – 1115 nm
Core NA	0.080 ± 0.005
First Cladding NA (5%)	≥ 0.460
Cladding Attenuation	$\leq 15.0 \text{ dB/km @ } 1095 \text{ nm}$
Cladding Absorption	$1.90 \pm 0.30 \text{ dB/m at } 915 \text{ nm}$

LMA-YDF-10/125-9M

Geometrical & Mechanical Specifications

Cladding Diameter (flat-to-flat)	$125.0 \pm 1.5 \text{ } \mu\text{m}$
Core Diameter	$10.5 \pm 1.0 \text{ } \mu\text{m}$
Coating Diameter	$245.0 \pm 10.0 \text{ } \mu\text{m}$
Coating Concentricity	$< 5.0 \text{ } \mu\text{m}$
Core/Clad Offset	$\leq 0.70 \text{ } \mu\text{m}$
Coating Material	Low Index Acrylate
Proof test Level	$\geq 100 \text{ kpsi (} 0.7 \text{ GN/m}^2 \text{)}$



Coating Non-Circularity < 2%
Precision matched passive versions of this fiber are also available - see LMA-GDF-10/125-M & LMA-GSF-10/125-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.

