



Eye Safe 9/125 Thulium-Doped Single-Mode Single Clad Fibers

This single clad, small core diameter fiber is designed specifically for use in core-pumped cavities. As the fiber is polarization maintaining, it is also suitable for applications requiring linearly polarized output.

Typical Applications

- Low/mid power 2 μm CW & pulsed Eye Safe lasers & amplifiers
- Eye Safe industrial & medical lasers
- Military & commercial LIDAR
- 2 μm fiber lasers for pumping crystal lasers

Features & Benefits

- Small diameter Tm-doped core design — Robust single mode beam quality
- May be pumped with 793 nm diodes or resonantly pumped using a fiber laser
- High pump absorption — Short fiber length, efficient lasing in the $\sim 2 \mu\text{m}$ window
- Core pumping facilitates access to shorter lasing wavelengths below 1900 nm

Optical Specifications

Operating Wavelength (nominal)

Core NA

Mode Field Diameter (predicted)

Cutoff

Core Absorption

Birefringence (predicted)

PM-TSF-9/125

2000 nm

0.150

10.5 μm @ 2000 nm
(nominal)

1750 \pm 100 nm

9.00 \pm 2.00 dB/m at 1180 nm

27.00 dB/m at 793 nm

nominal 2.5×10^{-4}

SM-TSF-9/125

2000 nm

0.150

10.5 μm @ 2000 nm
(nominal)

1750 \pm 100 nm

9.00 \pm 2.00 dB/m at 1180 nm

27.00 dB/m at 793 nm

N/A

Geometrical & Mechanical Specifications

Cladding Diameter

Core Diameter

Coating Diameter

Coating Concentricity

Core/Clad Offset

Coating Material

Proof Test Level

125.0 \pm 1.0 μm

9.0 μm

245.0 \pm 15.0 μm

< 20.0 μm

\leq 0.50 μm

Dual Acrylate

\geq 100 kpsi (0.7 GN/m²)

125.0 \pm 1.0 μm

9.0 μm

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< 20.0 μm

\leq 0.50 μm

Dual Acrylate

\geq 100 kpsi (0.7 GN/m²)

The passive version of each fiber is also available.



7 Airport Park Road, East Granby, CT 06026 • 860.408.5000 • Toll-free 866.466.0214 • Fax 860.844.0210 E-mail info@nufern.com • www.nufern.com Nufern products are manufactured under an ISO 9001:2008 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.

