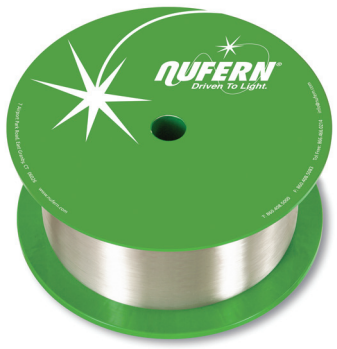


Ytterbium-Doped Single-Mode Single Clad Fiber

Nufern single-mode Yb-doped fibers are designed to support low power fiber lasers and amplifiers based on single-mode diode pump technology, rather than the multimode pumps used in high-power applications. For applications where high efficiency and very short device lengths are critical, these single-mode fibers are compatible with standard "telecom" fiber technology ensuring low splice loss to numerous fiber pigtailed components. The PM variety is designed with the PANDA-style stress structure which delivers linearly polarized light suitable for frequency conversion. These fibers make the ideal gain medium for low average power femtosecond fiber lasers and pre-amplifiers for higher power double-clad amplifiers.

Typical Applications

- Low power CW and pulsed fiber lasers
- Femtosecond fiber lasers
- Pre-amps for high-power, double-clad devices

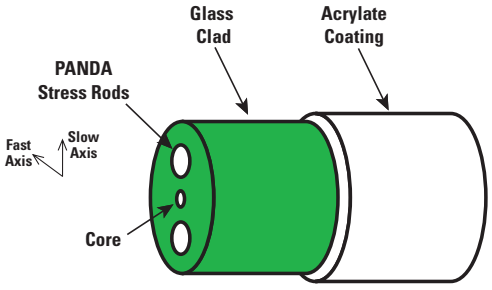
Features & Benefits

- Single-mode output — Compatiable with standard telecom 980/1060 nm fiber-based components
- PANDA-style stress structure — Linearly polarized output for frequency conversion
- High Ytterbium concentration — Short fiber lengths to reduce detrimental non-linear effects
- High slope efficiency (typically 75%) — Efficient utilization of pump power

Optical Specifications	PM-YSF-LO	SM-YSF-LO	PM-YSF-HI	SM-YSF-HI
Operating Wavelength (nominal)	1060 - 1115 nm	1060 - 1115 nm	1060 - 1115 nm	1060 - 1115 nm
MFD @ 1060 nm	6.5 ± 1.0 µm	6.5 ± 1.0 µm	7.5 ± 1.0 µm	7.5 ± 1.0 µm
Second Mode Cut-Off	860 ± 70 nm	860 ± 70 nm	860 ± 70 nm	860 ± 70 nm
Core Absorption @ 915 nm	25 ± 5 dB/m	25 ± 5 dB/m	85 dB/m *	85 dB/m *
Core Absorption @ 975 nm (nominal)	80 dB/m	80 dB/m	250 dB/m	250 dB/m
Core Numerical Aperture (nominal)	0.13	0.13	0.11	0.11
Birefringence	$\geq 2.5 \times 10^{-4}$	---	$\geq 2.5 \times 10^{-4}$	---
Geometrical & Mechanical Specifications				
Core Diameter (nominal)	5 µm	5 µm	6 µm	6 µm
Clad Diameter	125 ± 1 µm	125 ± 1 µm	125 ± 1 µm	125 ± 1 µm
Coating Diameter	245 ± 15 µm	245 ± 15 µm	245 ± 15 µm	245 ± 15 µm
Core-Clad Concentricity	≤ 0.5 µm	≤ 0.5 µm	≤ 0.5 µm	≤ 0.5 µm
Coating/Clad Offset	≤ 5 µm	≤ 5 µm	≤ 5 µm	≤ 5 µm
Proof Test Level	≥ 100 kpsi (0.7 GN/m²)	≥ 100 kpsi (0.7 GN/m²)	≥ 100 kpsi (0.7 GN/m²)	≥ 100 kpsi (0.7 GN/m²)
Coating Material	UV Cured, Dual Acrylate	UV Cured, Dual Acrylate	UV Cured, Dual Acrylate	UV Cured, Dual Acrylate
Operating Temperature	-55 to +85° C	-55 to +85° C	-55 to +85° C	-55 to +85° C

* Estimated value based on measured absorption @ 950 nm and 1010 nm

Note: *The passive version of this fiber is also available.*



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