

# 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 — Compatible 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

Operating Wavelength (nominal)  
MFD @ 1060 nm  
Second Mode Cut-Off  
Core Absorption @ 915 nm  
Core Absorption @ 975 nm (nominal)  
Core Numerical Aperture (nominal)  
Birefringence

### Geometrical & Mechanical Specifications

Core Diameter (nominal)  
Clad Diameter  
Coating Diameter  
Core-Clad Concentricity  
Coating/Clad Offset  
Proof Test Level  
Coating Material  
Operating Temperature

### PM-YSF-LO

1060 - 1115 nm  
6.5 ± 1.0 μm  
860 ± 70 nm  
25 ± 5 dB/m  
80 dB/m  
0.13  
≥ 2.5 × 10<sup>-4</sup>

### SM-YSF-LO

1060 - 1115 nm  
6.5 ± 1.0 μm  
860 ± 70 nm  
25 ± 5 dB/m  
80 dB/m  
0.13  
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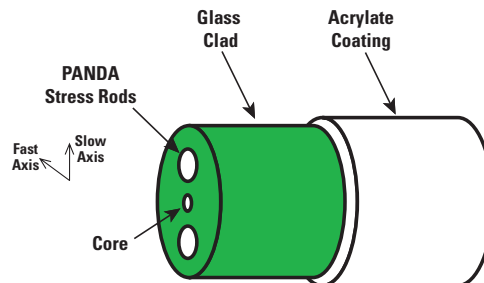
### PM-YSF-HI

1060 - 1115 nm  
7.5 ± 1.0 μm  
860 ± 70 nm  
85 dB/m \*  
250 dB/m  
0.11  
≥ 2.5 × 10<sup>-4</sup>

### SM-YSF-HI

1060 - 1115 nm  
7.5 ± 1.0 μm  
860 ± 70 nm  
85 dB/m \*  
250 dB/m  
0.11  
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\* Estimated value based on measured absorption @ 950 nm and 1010 nm



光技術をサポートする  
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