



# EyeSafe Delivery Fibers

Nufern has specifically engineered a unique range of single-mode 2 $\mu$ m beam delivery fibers for the long wavelength EyeSafe window from 1850-2200nm, available in both PM and non-PM versions. By applying our extensive fiber manufacturing expertise, gained in the demanding telecommunications industry, this family of fibers have excellent uniformity and high fatigue failure resistance. These fibers are aimed at emerging fiber applications for the 2 $\mu$ m wavelength, including medical, military/aerospace and industrial fiber laser markets.

## Typical Applications

- Pigtailling 2 $\mu$ m components
- Tm-fiber lasers/amplifiers
- 2 $\mu$ m beam delivery

## Features & Benefits

- Optimized for 2 $\mu$ m wavelengths — Higher performance
- Low bend loss at 2 $\mu$ m — Tighter packaging
- Tight tolerances — High product yield

### Optical Specifications

Operating Wavelength (nominal)	1850 - 2200 nm	1850 - 2200 nm
Mode Field Diameter (nominal)	8.0 $\mu$ m @ 1950 nm	8.0 $\mu$ m @ 1950 nm
Second Mode Cut-Off	1720 $\pm$ 80 nm	1720 $\pm$ 80 nm
Core Numerical Aperature (nominal)	0.20	0.20
Beat Length	NA	$\leq$ 5.2 mm @ 1950 nm
Birefringence	NA	$3.5 \times 10^{-4}$

### SM1950

### PM1950

### Geometrical & Mechanical Specifications

Core Diameter (nominal)	7 $\mu$ m	7 $\mu$ m
Clad Diameter	125 $\pm$ 1 $\mu$ m	125 $\pm$ 1 $\mu$ m
Coating Diameter	245 $\pm$ 15 $\mu$ m	245 $\pm$ 15 $\mu$ m
Core-Clad Offset	< 0.5 $\mu$ m	< 0.5 $\mu$ m
Coating Clad Concentricity	$\leq$ 5 $\mu$ m	$\leq$ 5 $\mu$ m
Coating Material	UV Cured, Dual Acrylate	UV Cured, Dual Acrylate
Operating Temperature	- 40 to + 85°C	- 40 to + 85°C
Proof Test Level	$\geq$ 100 kpsi (0.7 GN/m <sup>2</sup> )	$\geq$ 100 kpsi (0.7 GN/m <sup>2</sup> )

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