



Short Wavelength Pure Silica Core Polarization Maintaining Fibers

Nufern's industry leading short wavelength pure silica core polarization maintaining fibers have superior waveguide, radiation, and mechanical properties, enabling a large variety of applications in diverse markets. High consistency and extreme end-to-end control of optical properties provide particular advantage in spectrographic and frequency sensitive applications. The pure silica core fiber is optimum for demanding applications in the UV and visible spectrum requiring ultra-low attenuation over longer lengths and where resistance to radiation-induced damage and color center formation are critical.

Typical Applications

- Laser pigtailed
- Spectroscopy
- Sensors
- Bio-medical
- Metrology

Features & Benefits

- Panda-style configuration — Superior optical performance, intrinsically good radiation performance
- Tight specifications — Highly deterministic results, highest product yield
- High proof test — Low risk of mechanical damage and failure
- High fatigue failure resistance — Longest service life
- Pure silica core — Resistance to radiation-induced damage and color center formation

Optical Specifications

Operating Wavelength
Core NA
Mode Field Diameter (Gaussian)
Cutoff
Core Attenuation
Beat Length (nominal)
Birefringence

PM-S460-HP

460 – 550 nm
0.120
3.5 ± 0.3 μm @ 460 nm
420 ± 30 nm
≤ 30.0 dB/km @ 460 nm
2.3 mm @ 460 nm
nominal 2 × 10⁻⁴

PM-S630-HP

630 – 780 nm
0.120
4.2 ± 0.5 μm @ 630 nm
580 ± 40 nm
≤ 12.0 dB/km @ 630 nm
4.7 mm @ 630 nm
nominal 1.3 × 10⁻⁴

Geometrical & Mechanical Specifications

Cladding Diameter
Core Diameter
Coating Diameter
Coating Concentricity
Core/Clad Offset
Coating Material
Operating Temperature Range
Proof test Level

125.0 ± 1.0 μm	125.0 ± 1.0 μm
3.0 μm	3.5 μm
245.0 ± 15.0 μm	245.0 ± 15.0 μm
< 5.0 μm	< 5.0 μm
≤ 0.50 μm	≤ 0.50 μm
UV Cured, Dual Acrylate	UV Cured, Dual Acrylate
-40 to 85 °C	-40 to 85 °C
≥ 200 kpsi (1.4 GN/m ²)	≥ 200 kpsi (1.4 GN/m ²)



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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.

