



# 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<sup>-4</sup>

### 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<sup>-4</sup>

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

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



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.