



# Polarization Maintaining Short Wavelength Fibers

Nufern's industry leading visible and short wavelength Polarization Maintaining fibers have superior waveguide, radiation, and mechanical properties enabling a large variety of new critical 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 intrinsically high level of radiation resistance allows this family to operate for extended periods of time on low earth orbits, near and deep space, and in applications where risk of exposure to man-made radiation is great.

## Typical Applications

- Laser pigtailing
- Spectroscopy
- Sensors
- Bio-medical
- Metrology

## Features & Benefits

- PANDA-style configuration — Superior performance, intrinsically good radiation performance
- Tight specifications — Highly deterministic results, highest product yield
- High Proof Test — Low risk of mechanical handling failure
- High fatigue failure resistance — Longest service life

### Optical Specifications

Operating Wavelength (nominal)  
 MFD (1/e<sup>2</sup> fit - near field)  
 Second Mode Cut-Off  
 Attenuation  
 Beat Length (nominal)  
 Normalized Cross Talk  
 Birefringence (nominal)

### PM460-HP

460 – 700 nm  
 3.3 ± 0.5 μm @ 515 nm  
 410 ± 40 nm  
 ≤ 100 dB/km @ 488 nm  
 1.3 mm @ 460 nm  
 3.5 x 10<sup>-4</sup>

### PM630-HP

620 - 850 nm  
 4.5 ± 0.5 μm @ 630 nm  
 570 ± 50 nm  
 ≤ 12 dB/km @ 630 nm  
 1.8 mm @ 630 nm  
 3.5 x 10<sup>-4</sup>

### PM780-HP

770 - 1100 nm  
 5.3 ± 1.0 μm @ 850 nm  
 710 ± 60 nm  
 ≤ 4 dB/km @ 850 nm  
 2.4 mm @ 850 nm  
 ≤ -40 dB at 4 m @ 850 nm  
 3.5 x 10<sup>-4</sup>

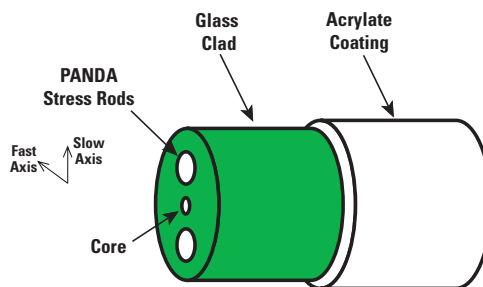
### Geometrical & Mechanical Specifications

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

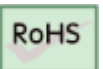
125 ± 1 μm  
 245 ± 15 μm  
 < 0.5 μm  
 ≤ 5 μm  
 UV Cured, Dual Acrylate  
 - 40 to + 85°C  
 ≥ 200 kpsi (1.4 GN/m<sup>2</sup>)

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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 9001:2000 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.