

CORNING



PANDA PM

High Performance Polarization Maintaining Fibers

Specialty Optical Fibers

PANDA PM Specialty Fibers are designed with the best polarization maintaining properties, and are the industry standard in the world today. The fibers offer low attenuation and excellent birefringence for high performance applications. Available in a wide range of standard operating wavelengths up to 1550 nm, and with a variety of coating designs, PANDA PM Specialty Fibers are optimal for high performance polarization retaining fiber applications. This field-proven fiber supports high growth applications, and performs well over a wide temperature range.

PANDA PM Specialty Optical Fiber design uses two stress applying parts to create an extremely high birefringence, resulting in fiber with excellent polarization maintaining properties. This design was invented and patented by Corning Incorporated. Corning continues to have a manufacturing partnership with Fujikura Ltd.

Applications

- [High performance transmission laser pigtailed](#)
- [Polarization-based modulators](#)
- [High data rate communications systems](#)
- [Polarization-sensitive components](#)
- [Raman amplifiers](#)
- [Fiber optic sensors, gyroscopes and instrumentation](#)

Key Optical Specifications for All Coatings

| | PM 1550 | PM14XX | PM 1310 | PM 980 | PM 850 | PM 630 | PM 480 | PM 400 |
|---------------------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Operating Wavelength (nm) | 1550 | 1400-1490 | 1310 | 980 | 850 | 630 | 480 | 410 |
| Cutoff Wavelength (nm) | 1300-1440 | 1260-1380 | 1130-1270 | 870-950 | 650-800 | 520-620 | 400-470 | 330-400 |
| Maximum Attenuation (dB/km) | 0.5 | 1.0 | 1.0 | 2.5 | 3.0 | 12 | 30 | ≤ 50 |
| Mode-field Diameter (μm) | 10.5 ± 0.5 | 9.8 ± 0.5 | 9.0 ± 0.5 | 6.6 ± 0.5 | 5.5 ± 0.5 | 4.5 ± 0.5 | 4.5 ± 0.5 | 3.5 ± 0.5 |
| Beat Length Range (mm) | 3.0-5.0 | 2.8-4.7 | 2.5-4.0 | 1.5-2.7 | 1.0-2.0 | ≤ 2.0 | ≤ 2.0 | ≤ 1.7 |
| Maximum Cross Talk @ 100 m (dB) | -30 | -30 | -30 | -30 | -30 | -30 | -30 | -30* |
| Typical Cross Talk @ 4 m (dB) | -40 | | | | | | | |

*PM 400 Cross Talk is -30dB/100 m at 410 nm and 480 nm measurement wavelengths

Key Geometric, Mechanical, and Environmental Specifications

245 μm UV/UV Acrylate Coating

| | PM 1550 | PM14XX | PM 1310 | PM 980 | PM 850 | PM 630 | PM 480 | PM 400 |
|-------------------------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Part Number | PM15-U25D | PM14-U25D | PM13-U25D | PM98-U25D | PM85-U25D | PM63-U25D | PM48-U25D | PM40-U25D |
| Cladding Outside Diameter (μm) | 125 ± 1 | | | | | | | |
| Coating Outside Diameter (μm) | 245 ± 15 | | | | | | | |
| Core-to-Cladding Concentricity (μm) | ≤ 0.5 | | | | | | | |
| Operating Temperature (°C) | -40 to +85 | | | | | | | |
| Standard Lengths* | 100 m, 200 m, 300 m, 400 m, 500 m, 1 km | | | | | | | |
| Proof Test (kpsi) | 100 (200 optional) | | | | | | | |

400 μm UV/UV Acrylate Coating

| | PM 1550 | PM14XX | PM 1310 | PM 980 | PM 850 | PM 630 | PM 480 | PM 400 |
|-------------------------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Part Number | PM15-U40D | PM14-U40D | PM13-U40D | PM98-U40D | PM85-U40D | PM63-U40D | PM48-U40D | PM40-U40D |
| Cladding Outside Diameter (μm) | 125 ± 1 | | | | | | | |
| Coating Outside Diameter (μm) | 400 ± 15 | | | | | | | |
| Core-to-Cladding Concentricity (μm) | ≤ 0.5 | | | | | | | |
| Operating Temperature (°C) | -40 to +85 | | | | | | | |
| Standard Lengths* | 100 m, 200 m, 300 m, 400 m, 500 m, 1 km | | | | | | | |
| Proof Test (kpsi) | 100 (200 optional) | | | | | | | |

Flame Retardant Coating

900 μm Polyester-Elastomer Coating

Polyester-Elastomer Coating is a UL® recognized component plastic with a flammability classification of V-O in accordance with UL94. Fibers with this coating have a VW-1 end product flammability classification in accordance with UL1581.

| | PM 1550 | PM14XX | PM 1310 | PM 980 | PM 850 | PM 630 | PM 480 | PM 400 |
|-------------------------------------|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Part Number | PM15-H90D | PM14-H90D | PM13-H90D | PM98-H90D | PM85-H90D | PM63-H90D | PM48-H90D | PM40-H90D |
| Cladding Outside Diameter (μm) | 125 ± 1 | | | | | | | |
| Coating Outside Diameter (μm) | 900 ± 100 | | | | | | | |
| Core-to-Cladding Concentricity (μm) | ≤ 0.5 | | | | | | | |
| Operating Temperature (°C) | -40 to +85 | | | | | | | |
| Standard Lengths* | 100 m, 200 m, 300 m, 400 m, 500 m, 1 km | | | | | | | |
| Proof Test (kpsi) | 100 (200 optional) | | | | | | | |

*For longer lengths contact Corning

For more information about Corning's leadership in Specialty Fiber technology, visit our website at www.corning.com/specialtyfiber
To obtain additional technical information, an engineering sample or to place an order for this product, please contact us at:

Corning Incorporated

Tel: +1-607-974-9974
Fax: +1-607-974-4122
E-mail: specialtyfiber@corning.com

© 2019 Corning Incorporated

