

Corning® PANDA PM Specialty Optical Fibers



*High
Performance
Polarization
Maintaining
Fibers*

Corning's 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, Corning 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.

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

Features:

- Extremely high birefringence
- Excellent polarization maintaining properties
- Low attenuation
- Single-mode designs from 400 nm – 1550 nm
- Dual-layer UV acrylate and 900 μm nylon and silicone coatings available
- Low sensitivity to bending-induced attenuation
- Low splice loss
- PANDA PM Fibers available:
 - High Numerical Aperture
 - Reduced claddings
 - Low birefringence
 - Erbium-doped
 - Dispersion shifted
 - Polyimide and flame retardant coatings are also available

Corning® PANDA PM Specialty Fibers

Key Optical Specifications	PM 1550	PM14XX	PM 1300	PM 980	PM 850	PM 630	PM 480	PM 400
	For all coatings							
Wavelength (nm)	1550	1400-1490	1300	980	850	630	480	410
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	4.0 ± 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 at 100 m (dB)	-30	-30	-30	-30	-30	-30	-30	-30*
Typical Cross Talk at 4 m (dB)	-40	-40	-40	-40	-40	-40	-40	-40
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

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

Key Geometric, Mechanical and Environmental Specifications (-U25A) UV/UV Acrylate

Part Number	PM15-U25A	PM14-U25A	PM13-U25A	PM98-U25A	PM85-U25A	PM63-U25A	PM48-U25A	PM40-U25A
Core-to-Cladding Offset (μm)	≤ 0.5							
Coating Outer Diameter (μm)	245 ± 15							
Cladding Outer Diameter (μm)	125 ± 1							
Standard Lengths	100 m, 200 m, 300 m, 400 m, 500 m							
Proof Test (kpsi)	100 (200 optional)							
Operating Temperature (°C)	-40 to 85							

Key Geometric, Mechanical and Environmental Specifications (-U40A) UV/UV Acrylate

Part Number	PM15-U40A	PM14-U40A	PM13-U40A	PM98-U40A	PM85-U40A	PM63-U40A	PM48-U40A	PM40-U40A
Core-to-Cladding Offset (μm)	≤ 0.5							
Coating Outer Diameter (μm)	400 ± 15							
Cladding Outer Diameter (μm)	125 ± 1							
Standard Lengths	100 m, 200 m, 300 m, 400 m, 500 m							
Proof Test (kpsi)	100 (200 optional)							
Operating Temperature (°C)	-40 to 85							

Key Geometric, Mechanical and Environmental Specifications (-N90A) UV/Nylon

Part Number	PM15-N90A	PM14-N90A	PM13-N90A	PM98-N90A	PM85-N90A	PM63-N90A	PM48-N90A	PM40-N90A
Core-to-Cladding Offset (μm)	≤ 0.5							
Coating Outer Diameter (μm)	900 ± 100							
Cladding Outer Diameter (μm)	125 ± 1							
Standard Lengths	100 m, 200 m, 300 m, 400 m, 500 m							
Proof Test (kpsi)	100 (200 optional)							
Operating Temperature (°C)	-40 to 60							

Corning® RC PANDA PM Specialty Fibers

	RC PM 1550	RC PM14XX	RC PM 1300	RC PM 980
Key Optical Specifications				
Wavelength (nm)	1550	1400-1490	1300	980
Mode-field Diameter (μm)	9.5 ± 0.5	9.0 ± 0.5	8.2 ± 0.5	6.0 ± 0.5
Beat Length Range (mm)	2.5 – 4.5	2.3 – 4.2	2.0 – 3.5	1.4 – 2.6
Cutoff Wavelength (nm)	1290 – 1450	1200 – 1380	1100 – 1290	870 – 950
Maximum Attenuation (dB/km)	≤ 2.0	≤ 2.0	≤ 2.0	≤ 2.5
Maximum Cross Talk at 100 m (dB)			-25	
Typical Cross Talk at 4 m (dB)			-40	

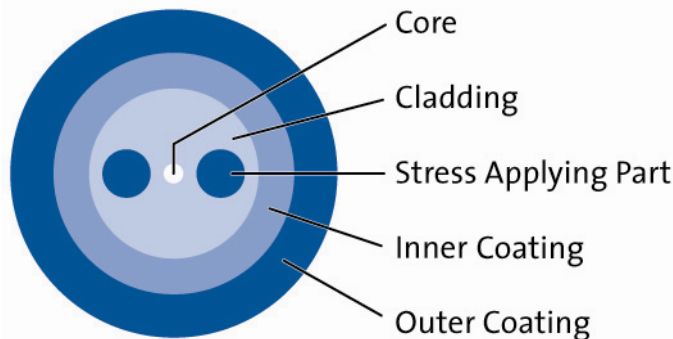
Key Geometric, Mechanical and Environmental Specifications				UV/UV Acrylate
Part Number	RCPM 15	RCPM 14	RCPM 13	RCPM 98
Core-to-Cladding Offset (μm)				≤ 0.5
Coating Outer Diameter (μm)				165 ± 10
Cladding Outer Diameter (μm)				80 ± 1
Standard Lengths		100 m, 200 m, 300 m, 400 m, 500 m		
Proof Test (kpsi)		100 (200 optional)		
Operating Temperature (°C)		-40 to 85		

Performance Characteristics*				
Numerical Aperture	0.09	0.09	0.09	0.10

* Values in this table are nominal or calculated values

	RC SMF Fiber	SMF-z8e+® Fiber	RC HI 1060
Wavelength (nm)	1550	1550	1550
RC PANDA PM 980 (dB)	0.25	0.25	0.07
RC PANDA PM 1550 (dB)	0.09	0.10	N/A

Typical Cross-sectional View of Corning PANDA PM Specialty Optical Fiber



Corning® 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.

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:

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