

Polarization Maintaining Fibre Series (PMF)

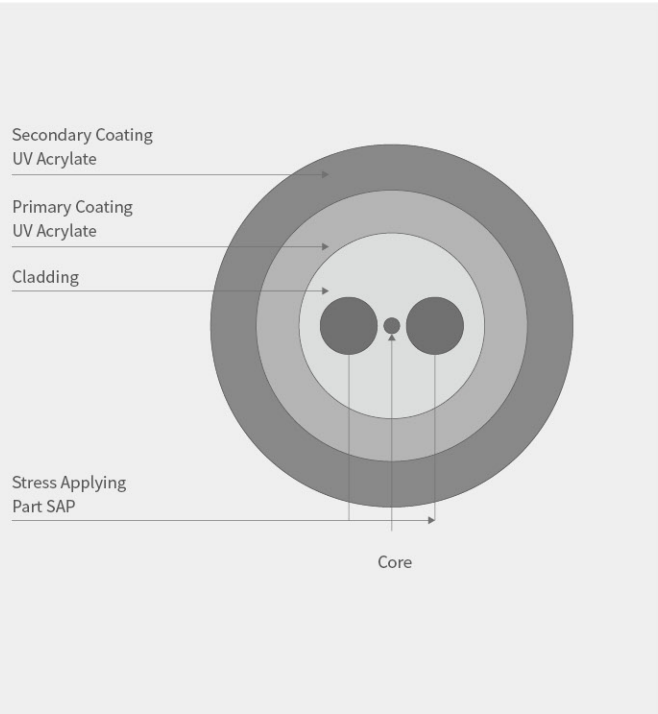


YOFC polarization maintaining fibre (PMF) is specially designed for fibre optic gyroscopes (FOGs) and polarization-sensitive components applications. This kind of fibre exhibits extremely low attenuation and excellent birefringence characteristics, and uses in a variety of demanding applications.

YOFC PMF is manufactured through the high precision Plasma Chemical Vapor Deposition (PCVD) process. This process produces preforms with precise refractive index profiles, material uniformity and dimensional tolerances, therefore, makes fibres with excellent birefringence, low attenuation and extremely tight tolerances.

With dual-layer, UV-cured Acrylate coating, YOFC polarization maintaining fibre has high environmental stability performance over the temperature range of -45°C to +85°C (-49 °F to +185 °F).

Polarization Maintaining Telecommunication Fibres



Characteristics

- Excellent polarization maintaining properties
- Tight geometric tolerances and very low attenuation
- Dual-layer UV-Acrylate coating and tight buffering structure
- High environmental stability and reliability

Application

- Polarization-sensitive components
- High performance transmission laser pigtails
- Pigtail to LiNbO3 FOG chip (IOC)
- Polarization-based sensors

Specifications-1

Fibre Type	PM 980 125-12/250	PM 980 125-12/400	PM 1310 125-13/250	PM 1310 125-13/400
Part No.	PM1015-A	PM1025-A	PM1016-C	PM1026-C
Optical Properties				
Operating Wavelength (nm)	980	980	1310	1310
Cut-off Wavelength (nm)	800~970	800~970	1100~1290	1100~1290
Mode Field Diameter (μm)	6.5±1.0	6.5±1.0	9.0±1.0	9.0±1.0
Attenuation (dB/km)	≤ 2.5	≤ 2.5	≤ 0.5	≤ 0.5
Beat Length (mm)	≤ 3.0	≤ 3.0	≤ 4.0	≤ 4.0
Typical Cross Talk at 4m (dB)	≤ -40	≤ -40	≤ -40	≤ -40
Cross Talk at 100m (dB)	≤ -25	≤ -25	≤ -25	≤ -25
Geometrical Properties				
Cladding Diameter (μm)	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0
Coating Diameter (μm)	245.0 ± 7.0	400.0± 15.0	245.0 ± 7.0	400.0± 15.0
Cladding Non-circularity (%)	≤1.0	≤1.0	≤1.0	≤1.0
Core Concentricity Error(μm)	≤1.0	≤1.0	≤1.0	≤1.0
Coating Type	Dual-layer/UV-Acrylate	Dual-layer/UV-Acrylate	Dual-layer/UV-Acrylate	Dual-layer/UV-Acrylate
Mechanical Properties				
Operating Temperature (°C)	-45~ +85	-45~ +85	-45~ +85	-45~ +85
Proof Test (kpsi)	100	100	100	100

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This datasheet can only be a reference, but not a supplement to the contract. Please contact our sales people for more detailed information

Specifications-2

Fibre Type	PM 14xx 125-13/250	PM 1550 125-13/250	PM 1550 125-13/400
Part No.	PM1018-A	PM1017-C	PM1027-C
Optical Properties			
Operating Wavelength (nm)	1400~1490	1550	1550
Cut-off Wavelength (nm)	1200~1380	1290~1520	1290~1520
Mode Field Diameter (μm)	9.8±1.0	10.5±1.0	10.5±1.0
Attenuation (dB/km)	≤ 0.5	≤ 0.5	≤ 0.5
Beat Length (mm)	≤ 4.5	≤ 5.0	≤ 5.0
Typical Cross Talk at 4m (dB)	≤-40	≤-40	≤-40
Cross Talk at 100m (dB)	≤-25	≤-25	≤-25
Geometrical Properties			
Cladding Diameter (μm)	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0
Coating Diameter (μm)	245.0 ± 7.0	245.0 ± 7.0	400.0± 15.0
Cladding Non-circularity (%)	≤1.0	≤1.0	≤1.0
Core Concentricity Error(μm)	≤1.0	≤1.0	≤1.0
Coating Type	Dual-layer/UV-Acrylate	Dual-layer/UV-Acrylate	Dual-layer/UV-Acrylate
Mechanical Properties			
Operating Temperature (°C)	-45~ +85	-45~ +85	-45~ +85
*Proof Test (kpsi)	100	100	100

Specifications-3

Fibre Type	PM 980 125-12/250_C	PM 1310 125-13/250_C	PM 14xx 125-13/250_C	PM 1550 125-13/250_C
Part No.	PM1015-A+	PM1016-C+	PM1018-A+	PM1017-C+
Optical Properties				
Operating Wavelength (nm)	980	1310	1400~1490	1550
Cut-off Wavelength (nm)	800~970	1100~1290	1200~1380	1290~1520
Mode Field Diameter (μm)	6.5±1.0	9.0±1.0	9.8±1.0	10.5±1.0
Attenuation (dB/km)	≤ 2.5	≤ 0.5	≤ 0.5	≤ 0.5
Beat Length (mm)	3.0~5.0	3.0~6.0	4.0~7.5	4.5~8.0
Typical Cross Talk at 4m (dB)	≤-30	≤-30	≤-30	≤-30
Cross Talk at 100m (dB)	≤-25	≤-25	≤-25	≤-25
Geometrical Properties				
Cladding Diameter (μm)	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0
Coating Diameter (μm)	245.0 ± 7.0	245.0 ± 7.0	245.0 ± 7.0	245.0 ± 7.0
Cladding Non-circularity (%)	≤1.0	≤1.0	≤1.0	≤1.0
Core Concentricity Error (μm)	≤1.0	≤1.0	≤1.0	≤1.0
Coating Type	Dual-layer; UV-Acrylate	Dual-layer; UV-Acrylate	Dual-layer; UV-Acrylate	Dual-layer; UV-Acrylate
Mechanical Properties				
Operating Temperature (°C)	-45~ +85	-45~ +85	-45~ +85	-45~ +85
*Proof Test (kpsi)	100	100	100	100

· Customized PMFs are available with different application designs.
· Standard proof test minimum is 1%. 2% proof test fibre is available.

Polarization Maintaining Birefringence Matching Fibre

Characteristics

- Excellent birefringence matching properties
- Excellent polarization maintaining properties
- Excellent polishing properties
- Tight geometric tolerances
- Low bending-induced attenuation
- Tight tolerance, dual-layer, and UV-Acrylate coating
- High environmental stability and reliability

Application

- Pigtail to LiNbO3 FOG chip (IOC)
- Polarization maintaining fused-fibre couplers
- Polarization-sensitive components
- High performance transmission laser pigtails
- Polarization-based sensors

Specifications

Fibre Type	PM 1310 125-16/250_C	PM 1310 125-16/250_Y	PM 1550 125-18/250_Y	PM 1310 80-16/165_Y	PM 1550 80-18/165_Y
Part No.	PM1016-D	PM1016-E	PM1017-E	PM1016-F	PM1017-F
Optical Properties					
Operating Wavelength (nm)	1310	1310	1550	1310	1550
Cut-off Wavelength (nm)	1100~1290	1100~1290	1290~1520	1100~1290	1290~1520
Mode Field Diameter (μm)	6.5±1.0	6.0±1.0	6.5±1.0	6.0±1.0	6.5±1.0
Attenuation (dB/km)	≤ 1.0	≤ 0.6	≤ 0.6	≤ 0.6	≤ 1.0
Beat Length (mm)	4.0~6.0	2.5~4.0	2.5~4.5	2.5~4.0	2.5~4.5
Typical Cross Talk at 4m (dB)	≤-30	≤-30	≤-30	≤-30	≤-30
Cross Talk at 100m (dB)	≤-25	≤-30	≤-30	≤-30	≤-30
Geometrical Properties					
Cladding Diameter (μm)	125.0 ± 1.0	125.0 ± 1.0	125.0 ± 1.0	80.0 ± 1.0	80.0 ± 1.0
Coating Diameter (μm)	245.0 ± 7.0	245.0 ± 7.0	245.0 ± 7.0	170.0 ± 7.0	170.0 ± 7.0
Cladding Non-Circularity (%)	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0
Core Concentricity Error (μm)	≤1.0	≤1.0	≤1.0	≤1.0	≤1.0
Coating Type	Dual-layer; UV-Acrylate	Dual-layer; UV-Acrylate	Dual-layer; UV-Acrylate	Dual-layer; UV-Acrylate	Dual-layer; UV-Acrylate
Mechanical Properties					
Operating Temperature(°C)	-45~ +85	-45~ +85	-45~ +85	-45~ +85	-45~ +85
*Proof Test (kpsi)	100	100	100	100	100

· Customized PMFs are available with different application designs.
· Standard proof test minimum is 1%. 2% proof test fibre is available.

Polarization Maintaining Gyroscope & Sensor Fibre

Characteristics

- Short beat length
- Extremely high birefringence
- Excellent polarization maintaining properties
- Tight geometric tolerances and very low attenuation
- Low bending-induced attenuation
- Tight tolerance, dual-layer, and UV-Acrylate coating
- High environmental stability and reliability

Application

- Fibre Optic Gyroscopes (FOGs)
- Polarization maintaining fused-fibre couplers
- Polarization-sensitive components
- High performance transmission laser pigtails
- Polarization-based sensors

Specifications

Fibre Type	PM 1310 125-16/250	PM 1310 80-16/165	PM 1550 125-18/250	PM 1550 80-18/165	PMF 1310/ 80-16/135	PMF 1550/ 80-18/135
Part No.	PM1016-A	PM1016-B	PM1017-A	PM1017-B	PM 1016-G	PM 1017-G
Optical Properties						
Operating Wavelength (nm)	1310	1310	1550	1550	1310	1550
Cut-off Wavelength (nm)	1100~1290	1100~1290	1290~1520	1290~1520	1100 - 1290	1290 - 1520
Mode Field Diameter (µm)	6.0±1.0	6.0±1.0	6.5±1.0	6.5±1.0	6.0 ± 0.5	6.5 ± 0.5
Attenuation (dB/km)	≤ 0.6	≤ 0.6	≤ 0.5	≤ 0.8	≤ 0.6	≤ 0.8
Beat Length (mm)	≤ 3.0	≤ 3.0	≤ 3.5	≤ 3.5	≤ 2.5	≤ 3.0
Cross Talk at 1000m (dB)	≤ -30	≤ -30	≤ -30	≤ -30	≤ -25	≤ -25
Geometrical Properties						
Cladding Diameter (µm)	125.0 ± 1.0	80.0 ± 1.0	125.0 ± 1.0	80.0 ± 1.0	80.0 ± 1.0	80.0 ± 1.0
Coating Diameter (µm)	245.0 ± 7.0	170.0 ± 7.0	245.0 ± 7.0	170.0 ± 7.0	135 ± 5	135 ± 5
Cladding Non-Circularity (%)	≤1.0	≤1.0	≤1.0	≤1.0	≤ 1.0	≤ 1.0
Core Concentricity Error (µm)	≤1.0	≤1.0	≤1.0	≤1.0	≤ 0.5	≤ 0.5
Coating Type	Dual-layer; UV-Acrylate	Dual-layer; UV-Acrylate	Dual-layer; UV-Acrylate	Dual-layer; UV-Acrylate	Dual-layer; UV-Acrylate	Dual-layer; UV-Acrylate
Mechanical Properties						
Operating Temperature (°C)	-45~ +85	-45~ +85	-45~ +85	-45~ +85	-45~ +85	-45~ +85
*Proof Test (100 kpsi)	100	100	100	100	100	100

• Customized PMFs are available with different application designs.
• Standard proof test minimum is 1%. 2% proof test fibre is available.

