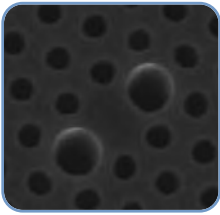
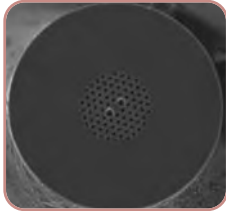


Polarization-Maintaining Photonic Crystal Fiber



Top & Bottom:
SEM of
PM-1550-01



Birefringence in conventional polarization-maintaining (PM) fibers is created elasto-optically by incorporating materials with different thermal expansion properties close to the core, which generates stress when the fiber cools down in the drawing process. Strong form birefringence is caused by the noncircular core in combination with the large refractive index difference between air and glass. The result is a shorter beat length, which reduces the bend-induced coupling between polarization states and the birefringence sensitivity to temperature changes. The temperature coefficient of birefringence for these fibers is up to 30 times less than that of other leading stress-birefringent fibers.

Measured Near Field
Profile (Log Scale) of
PM-1550-01



Applications

- Gyroscopes
- Sensors
- Interferometers

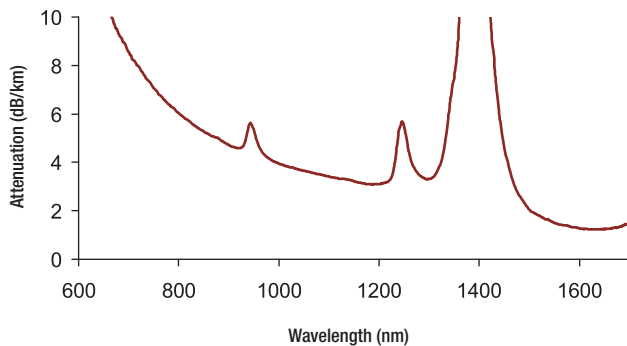
Features

- Beat Length <4 mm (Beat Lengths of <1 mm Possible)
- Polarization Extinction Ratio (PER) >30 dB Over 100 m
- Temperature Sensitivity 30x Lower than that of Other Leading Stress-Birefringent Fibers
- Undoped Pure Silica Core and Cladding
- Near-Gaussian Mode Profile (Ellipticity of Approximately 1.5)

Specifications (@1550 nm)

- **Mode Field Diameter Long/Short Axis:**
 - S-Polarization: 3.6/3.1 μm
 - P-Polarization: 3.6/3.1 μm
- **Attenuation:** <1 dB/km
- **Beatlength:** <4 mm (Typ.)
- **Differential Group Delay:** 2.25 ns/km
- **Polarization Extinction Ratio (PER):** >30 dB/100m (\varnothing 155 mm Spool Typ.)
- **Chromatic Dispersion:**
 - S-Polarization: 54 ps/nm/km
 - P-Polarization: 59 ps/nm/km
- **Pitch, Λ (Spacing Between Holes):** 4.4 μm
- **Large Hole Diameter:** 4.5 μm
- **Small Hole Diameter:** 2.2 μm
- **Diameter of Holey Region:** 40 μm
- **Outside Diameter:** 125 μm
- **Coating Diameter (Single Layer Acrylate):** 230 μm

Loss of Wavelength of PM-1550-01



ITEM#	PRICE/m	\$	£	€	RMB
PM-1550-01*	1 to 9 m	\$ 137.00	£ 94.55	€ 121,95	¥ 1,156.30
	10 to 49 m	\$ 86.00	£ 59.35	€ 76,55	¥ 725.90
	50 m and Up	\$ 73.00	£ 50.35	€ 64,95	¥ 616.20

*This fiber is experimental and may be subject to modification, production limitations, or cancellation



TOOLS
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TXP5000 Series Test and Measurement



Our TXP measurement platform offers a multitude of plug-in modules to satisfy the most demanding test and measurement applications.

See Page 1210 for Details.