

Polarization Maintaining 1550 nm Telecommunication Fibers



Coherent's Polarization Maintaining Telco fibers are designed for today's most advanced networks. Optimized for use at 1550 nm, these fibers are used in all PM applications for data and telecom. Coherent has applied its unique manufacturing facility and capabilities to this product area and has established leading optical, mechanical and geometrical tolerances. The bend insensitive versions of our fibers offer lowest bend loss and extinction ratios at small bend diameters enabling our customers to reduce package sizes. Available in either 250 or 400 micron coating diameters and proof tested to 200 kpsi, Coherent's PM fibers will meet the demands of all current and future applications.

Typical Applications

- Pump and signal pigtails
- Lithium niobate modulators
- PMD compensators
- PM patchcords
- Polarization sensitive devices

Features & Benefits

- Tight specifications — Highly deterministic results, highest product yield
- High fatigue failure resistance — Longest service life
- Bend insensitive — Survives application in tight geometries (B version)
- All fiber proof tested to > 200 kpsi — Critical for ensuring long term reliability

Optical Specifications

	PM1550-XP	PM1550B-XP	PM1550-400	PM1550B-400
Operating Wavelength	1440 – 1625 nm	1440 – 1625 nm	1440 – 1625 nm	1440 – 1625 nm
Core NA	0.125	0.125	0.125	0.125
Mode Field Diameter	10.1 ± 0.4 μm @ 1550 nm	10.1 ± 0.4 μm @ 1550 nm	10.1 ± 0.4 μm @ 1550 nm	10.1 ± 0.4 μm @ 1550 nm
Maximum Bend Loss	N/A	0.5 dB at 1550 nm, 25 mm OD, 10 turns	N/A	0.5 dB at 1550 nm, 25 mm OD, 10 turns
Cutoff	1380 ± 60 nm	1380 ± 60 nm	1380 ± 60 nm	1380 ± 60 nm
Core Attenuation	≤ 1.0 dB/km @ 1550 nm	≤ 0.5 dB/km @ 1550 nm	≤ 1.0 dB/km @ 1550 nm	≤ 0.5 dB/km @ 1550 nm
Beat Length	≤ 5.0 mm @ 1550 nm	≤ 5.0 mm @ 1550 nm	≤ 5.0 mm @ 1550 nm	≤ 5.0 mm @ 1550 nm
Normalized Cross Talk	≤ - 40.0 dB at 4 m @ 1550 nm ≤ - 30.0 dB at 100 m @ 1550 nm	≤ - 40.0 dB at 4 m @ 1550 nm ≤ - 30.0 dB at 100 m @ 1550 nm	≤ - 40.0 dB at 4 m @ 1550 nm ≤ - 30.0 dB at 100 m @ 1550 nm	≤ - 40.0 dB at 4 m @ 1550 nm ≤ - 30.0 dB at 100 m @ 1550 nm
Bending Cross Talk	N/A	-30 dB at 1550 nm, 25 mm OD, 10 turns	N/A	-30 dB at 1550 nm, 25 mm OD, 10 turns

Geometrical & Mechanical Specifications

Cladding Diameter	125.0 ± 1.0 μm	125.0 ± 1.0 μm	125.0 ± 1.0 μm	125.0 ± 1.0 μm
Core Diameter	8.5 μm	8.5 μm	8.5 μm	8.5 μm
Coating Diameter	245.0 ± 15.0 μm	245.0 ± 15.0 μm	400.0 ± 15.0 μm	400.0 ± 15.0 μm
Coating Concentricity	< 5.0 μm	< 5.0 μm	< 10.0 μm	< 10.0 μm
Core/Clad Offset	≤ 0.50 μm	≤ 0.50 μm	≤ 0.50 μm	≤ 0.50 μm
Coating Material	Acrylate	Acrylate	Acrylate	Acrylate
Operating Temperature Range	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C	-40 to 85 °C
Proof test Level	≥ 200 kpsi (1.4 GN/m ²)	≥ 200 kpsi (1.4 GN/m ²)	≥ 200 kpsi (1.4 GN/m ²)	≥ 200 kpsi (1.4 GN/m ²)



Special Core Dopants: SiO₂/GeO₂.

Nufern • 7 Airport Park Road, East Granby, CT 06026 • 860.408.5000 • Toll-free 866.466.0214 • Fax 860.844.0210 • Email: tech.sales@coherent.com
www.coherent.com ; www.shop.coherent.com • Coherent products are manufactured under an ISO 9001:2008 certified quality management system.



Custom developed fiber (FUD) 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 Coherent can assist with your requirements.

NU0163- 11/12/2020