Standard Panda Polarization-Maintaining Fiber at 1310nm – PM1310-125-6.0/245 for FOGs and Precision Photonic Devices

Product Overview

Fabricated using the Modified Chemical Vapor Deposition (MCVD) process, this standard panda-type PM fiber features a germanosilicate core surrounded by two boron-doped stress-applying parts (SAPs) that generate high linear birefringence. This structure effectively locks the polarization state of launched light, achieving polarization crosstalk of ⩽ -28 dB over 1 meter at 1310 nm.

With a conventional 245 μm dual acrylate coating and precise 125 μm cladding geometry, the fiber offers excellent handling robustness, low microbending sensitivity, and compatibility with standard fusion splicers equipped with rotational alignment. Its low attenuation (⩽0.8 dB/km) and tight mode field diameter control (6.0 ±0.5 μm) ensure minimal insertion loss in pigtailed devices and sensor assemblies.

Technical Specifications

Brand Name	Winner
Model Number	PM1310-125-6.0/245

Fiber Type	Panda-Type Polarization-Maintaining Single-Mode Fiber
Operating Wavelength	1310 nm
Attenuation	⩽0.8 dB/km @1310 nm
Mode Field Diameter	6.0 ± 0.5 μm @1310 nm
Cut-off Wavelength	1100–1270 nm
Cladding Diameter	125 ± 1 μm
Coating Diameter	245 ± 5 μm
Polarization Crosstalk	⩽ -28 dB per meter @1310 nm
Bow (Shoot Length)	⩽ 3.0 mm per meter
Tension Screening Level	⩾100 kpsi
Manufacturing Process	Modified Chemical Vapor Deposition (MCVD)
Key Performance	High geometric uniformity for consistent coil winding Low splicing loss with axis alignment (0.2 dB typical) Excellent thermal and mechanical stability Compliant with Telcordia GR-20 reliability standards

Applications

- Fiber optic gyroscopes (FOGs) for aerospace navigation and stabilization
- Polarization-maintaining couplers, isolators, and circulators
- Laser diode and fiber laser pigtails requiring polarized output
- Interferometric current and acoustic sensors
- Quantum optics and coherent communication test platforms

Integration Guidance

For optimal polarization extinction ratio (PER), align the slow axis (indicated by SAP orientation) during splicing using a rotational fusion splicer. Maintain bend radii >15 mm to avoid induced birefringence distortion. The standard 245 µm coating ensures compatibility with commercial fiber handling tools, connectors, and protective sleeves.