Bend Insensitive Fiber (BIF)

Overview

Wave2Wave's Bend-Insensitive Fiber (BIF) is built for today's high-performance, space-optimized network infrastructures. Using advanced glass and coating technology, it delivers exceptional optical stability under tight bending conditions, allowing flexible routing without performance loss.

Ideal for high-density fiber environments, Wave2Wave BIF enables tighter cable routing, reduced maintenance, and superior network reliability in constrained pathways. Its low bending loss ensures consistent transmission quality in patch panels, racks, and cabling trays, simplifying installation in both new and existing networks.

Compared to conventional G.652 fibers, Wave2Wave BIF offers enhanced bend resilience, lower attenuation, and excellent long-term stability. Designed for FTTH, enterprise, and data center systems, it provides a future-ready foundation for scalable, high-capacity optical connectivity.



Features & Benefits

- Ultra-low micro-bending loss from 7 to 15mm bend radius
- Fully compatible with ITU-T G.652 single-mode fiber standards
- Minimal bending loss at tight radii for confined installations
- Reduces space requirements for fiber management and routing
- Eases installation tolerances, simplifying system deployment
- Low insertion loss with G.652-compatible fibers and patch cords
- Produces very low fusion splice loss with G.652 fibers
- Enables tight in-building and high-density panel installations
- Prevents coating damage under high-power system operation

Applications

- FTTH (Fiber to the Home)
- Telecom and Datacom networks
- Storage and SAN connectivity
- CATV distribution
- Multimedia and enterprise systems

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Standard SMF-28



ITU-T G. 657 Type A

Fiber Type	ITU-T G. 657 Type A
Jacket Diameter	2.0mm
Attenuation	≤0.4 dB/km at 1310nm ≤0.3 dB/km at 1550nm
Fiber Cutoff Wavelength	≤1260nm
Mode Field Diameter	9.0±0.5um at 1310nm 10.0±0.6um at 1550nm
Macrobend Loss	≤0.75 dB for 1 turn around a mandrel of 10mm radius at 1550nm ≤0.25 dB for 10 turn around a mandrel of 15mm radius at 1550nm
Connector Insertion Loss	≤0.3 dB for (UPC) ≤0.5 dB for (APC)
Connector Return Loss	≤-40 dB for (UPC) ≤-50 dB for (APC)
Operating Temperature	-20 to 70ºC

Standards Compliance

- Telcorida GR-326-CORE
- TIA/EIA-568B-B.3 Fiber Optic Cabling Components Standard
- IEEE802.3z Standards for Fiber Optic Cabling
- RoHS Approved for European Market Requirements

RoHS

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