

The Industry's Best Macrobend Performance in a Solid-Core G.652.D-Compatible Fiber

Overview

EZ-Bend® Single-Mode Fiber offers outstanding bend performance to a 2.5 mm radius for the most challenging in-residence and MDU applications. The fiber, developed using OFS' groundbreaking EZ-Bend Optical Technology, provides at least three times' lower loss at tight bends than comparable products. Compatible with the installed base of conventional G.652.D single-mode fibers, the fiber meets and exceeds ITU-T G.657.B3 recommendations.

Product Description

EZ-Bend Fiber offers the industry's lowest signal loss due to bending across the full spectrum of wavelengths from 1260 to 1625 nm, while ensuring long-term fiber strength and reliability. It can be coiled into a 2.5 mm radius loop with ≤ 0.20 dB incurred loss at 1550 nm and ≤ 0.30 dB incurred loss at 1625 nm.

Cables using EZ-Bend Fiber can be routed around corners and deployed using traditional fast and easy copper wire installation processes with negligible signal loss. Ideal for aggressive routing environment where space is at a premium, EZ-Bend Fiber offers reliable support for MDU and in-home wiring applications.

EZ-Bend Fiber features solid synthetic glass construction that enables uniform macrobending loss axially and in all bending planes. This results in easy splicing to G.652.D fibers with existing core and clad alignment splicers and standard termination using conventional optical connectors and polishing techniques.

OFS maximizes the reliability of EZ-Bend Fiber through the use of our highly protective D-Lux® ULTRA acrylate coating. Our extensive mechanical testing has demonstrated that the product can reliably support 2.5 mm bends. This enables us to reliably achieve significantly smaller bend diameters with up to 500 times' lower loss than traditional single-mode fiber.

EZ-Bend Fiber retains full spectrum performance due to OFS' patented fiber manufacturing process, which eliminates hydrogen-aging defects. Its ultra-low fiber Polarization Mode Dispersion (PMD) enables speed and distance upgrades.

Features/Benefits:

- Full spectrum fiber provides a 40% increase in usable optical spectrum ready for XG-PON and NG-PON2
- Fully compliant with the ITU-T G.657.B3 recommendation; also compatible with ITU-T G.652.D
- Designed for in-building and MDU applications
- The only G.657.B3 solid glass fiber designed to reliably support low loss even with 2.5 mm radius bends
- Tight geometry for low splice loss and improved connectorization performance
- Excellent fusion splice performance

Outstanding Macrobend Performance

- 1 turn on a 5 mm radius mandrel
 ≤ 0.10 dB at 1550 nm
 ≤ 0.20 dB at 1625 nm
- 1 turn on a 2.5 mm radius mandrel
 ≤ 0.20 dB at 1550 nm
 ≤ 0.30 dB at 1625 nm



Product Specifications

Applications

EZ-Bend Fiber provides outstanding bend performance and design freedom for fiber management systems in:

- FTTH – Multi-dwelling Units (MDUs), in-building applications and drop cables
- Central office
- High power applications
- Closures
- At the customer premises

For additional information please contact your sales representative.

You can also visit our website at: www.ofsoptics.com/ofsfiber or call 1-888-fiberhelp (from inside the USA). For regional assistance, contact the global location closest to you.



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Physical Characteristics

Clad Diameter	125.0 ± 0.7 μm
Clad Non-Circularity	≤ 0.7 %
Core/Clad Concentricity Error (Offset)	≤ 0.5 μm, ≤ 0.2 μm typically
Coating Diameter (Uncolored)	235 - 245 μm
Coating-Clad Concentricity Error (Offset)	≤ 12 μm
Tensile Proof Test	100 kpsi (0.69 GPa)
Coating Strip Force	Range: 1.0 N ≤ CSF ≤ 8.9 N
Standard Reel Lengths	up to 32 km

Optical Characteristics

Attenuation	Maximum
at 1310 nm	≤ 0.35 dB/km
at 1383 nm ¹	≤ 0.35 dB/km
at 1490 nm	≤ 0.24 dB/km
at 1550 nm	≤ 0.21 dB/km
at 1625 nm	≤ 0.23 dB/km

¹ After H2 aging tests according to IEC 60793-2-50

Attenuation vs. Wavelength²

Range (nm)	Reference (nm) λ	α
1285 – 1330	1310	0.03
1360 – 1480	1383	0.04
1525 – 1575	1550	0.02
1460 – 1575	1550	0.04

² The attenuation in a given wavelength range does not exceed the attenuation of the reference wavelength (λ) by more than the value α.

Attenuation Uniformity / Point Discontinuities at 1310 nm and 1550 nm	≤ 0.05 dB
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Chromatic Dispersion

Zero Dispersion Wavelength (λ ₀)	1250 – 1324 nm
Slope at Zero Dispersion Wavelength (S ₀)	≤ 0.11 ps/nm ² -km

Group Refractive Index

at 1310 nm	1.467
at 1550 nm	1.467

Mode Field Diameter

at 1310 nm	8.3 – 9.1 μm
at 1550 nm	9.2 – 10.4 μm

Cut-off Wavelength (λ _{cc})	≤ 1260 nm
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Polarization Mode Dispersion (PMD)³

Fiber PMD Link Design Value (LDV) ⁴	≤ 0.06 ps/√km
Maximum Individual Fiber	≤ 0.1 ps/√km

³ As measured with low mode coupling (LMC) technique in fiber form, value may change when cabled. Check with your cable manufacturer for specific PMD limits in cable form.

⁴ The PMD Link Design Value complies with IEC 60794-3, September 2001 (N = 20, Q = 0.01%). Details are described in IEC 61282-3 TR Ed 2, October 2006.

Environmental Characteristics (at 1310, 1550 & 1625 nm)

Temperature Cycling (-60° + 85° C)	≤ 0.05 dB/km
High Temperature Aging (85 ± 2° C)	≤ 0.05 dB/km
Water Immersion (23 ± 2° C)	≤ 0.05 dB/km

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