Corning® ClearCurve® XB Optical Fiber

Product Information

CORNING

Corning® ClearCurve® XB optical fiber is a full-spectrum fiber with enhanced macrobend performance compared to legacy single-mode fibers. The fiber exceeds the ITU-T Recommendation G.657.A1 and remains fully compliant with ITU-T Recommendation G.652.D and compatible with the installed base of Corning® SMF-28e® and SMF-28e+® fiber.

Optical Specifications

Maximum Attenuation

Wavelength (nm)	Maximum Value* (dB/km)
1310	0.33 – 0.35
1383**	0.31 – 0.35
1490	0.21 – 0.24
1550	0.19 – 0.20
1625	0.20 – 0.23

*Maximum specified attenuation value available within the stated ranges.
**Attenuation post-hydrogen aging according to IEC 60793-2-50 Section C.5 for B.1.3 fibers.
Alternate attenuation offerings available upon request.

Attenuation vs. Wavelength

Range (nm)	Ref. λ (nm)	Max. α Difference (dB/km)
1285 – 1330	1310	0.03
1525 – 1575	1550	0.02

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

Macrobend Loss

Mandrel Radius (mm)	Number of Turns	Wavelength (nm)	Induced Attenuation* (dB)
10	1	1625	1.5
10	1	1550	0.50

*The induced attenuation due to fiber wrapped around a mandrel of a specified diameter.

Point Discontinuity

Wavelength (nm)	Point Discontinuity (dB)
1310	≤ 0.05
1550	≤ 0.05

Cable Cutoff Wavelength (λ_{cc})

$\lambda_{cc} \leq 1260$ nm

Mode-Field Diameter

Wavelength (nm)	MFD (μm)
1310	8.6 ± 0.4
1550	9.8 ± 0.5

Dispersion

Wavelength (nm)	Dispersion Value [ps/(nm•km)]
1550	≤ 18.0
1625	≤ 22.0

Zero Dispersion Wavelength (λ_0):
1304 nm ≤ λ_0 ≤ 1324 nm
Zero Dispersion Slope (S_0): ≤ 0.089 ps/(nm²•km)

Polarization Mode Dispersion (PMD)

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

*Complies with IEC 60794-3: 2001, Section 5.5, Method 1, (m = 20, Q = 0.01%), September 2001.

The PMD link design value is a term used to describe the PMD of concatenated lengths of fiber (also known as PMDQ). This value represents a statistical upper limit for total link PMD. Individual PMD values may change when fiber is cabled.

How to Order

Contact your sales representative, or call the Optical Fiber Customer Service Department:
Ph: 1-607-248-2000 (U.S. and Canada)
+44-1244-525-320 (Europe)
Email: cofic@corning.com
Please specify the fiber type, attenuation, and quantity when ordering.

Dimensional Specifications

Glass Geometry

Fiber Curl	≥ 4.0 m radius of curvature
Cladding Diameter	125.0 ± 0.7 µm
Core-Clad Concentricity	≤ 0.5 µm
Cladding Non-Circularity	≤ 0.7%

Coating Geometry

Coating Diameter	242 ± 5 µM
Coating-Cladding Concentricity	<12 µM

Environmental Specifications

Environmental Test	Test Condition	Induced Attenuation 1310 nm, 1550 nm, and 1625 nm (dB/km)
Temperature Dependence	-60°C TO +85°C*	≤ 0.05
Temperature Humidity Cycling	-10°C TO +85°C* UP TO 98% RH	≤ 0.05
Water Immersion	23°± 2°C	≤ 0.05
Dry Heat Soak	85°± 2°C*	≤ 0.05
Damp Heat	85°C AT 85% RH	≤ 0.05

*Reference temperature = +23°C

Operating Temperature Range: -60°C to +85°C

Mechanical Specifications

Proof Test

The entire fiber length is subjected to a tensile stress ≥100 kpsi (0.7 GPa)*.

*Higher proof test levels available.

Length

Fiber lengths available up to 50.4* km/spool.

*Longer spliced lengths available.

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