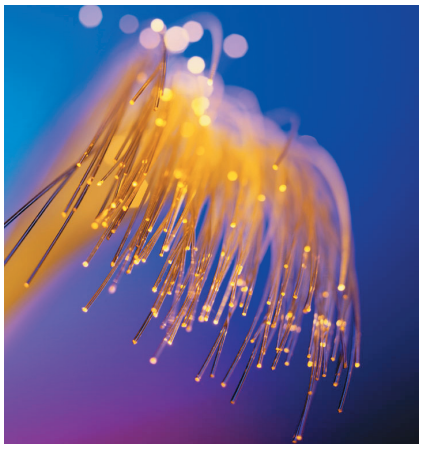

Corning® SMF-28e® XB Optical Fiber
Product Information

Corning® SMF-28e® XB fiber is a full-spectrum optical fiber with improved macrobend performance compared to legacy single-mode fibers. This fiber is compliant with the following standards: ITU-T G.652, Table D and ITU-T G.657, Table A.

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 values at this wavelength represent post-hydrogen aging performance.
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 Diameter (mm)	Number of Turns	Wavelength (nm)	Induced Attenuation* (dB)
20	1	1550	≤ 0.50
30	10	1550	≤ 0.05
60	100	1625	≤ 0.01

*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_{ccf})

$\lambda_{ccf} \leq 1260$ 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):
1302 nm ≤ λ_0 ≤ 1322 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	≤0.2

*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 PMD_Q). 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: opticalfibcs@corning.com
Please specify the fiber type, attenuation and quantity when ordering.

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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	245 ± 5 µm
Coating-Cladding Concentricity	<12 µm

Environmental Specifications

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

*Reference temperature = +23ºC

Operating Temperature Range: -60ºC to +85ºC

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.

For additional information, contact your sales representative or call the Optical Fiber Customer Service Department:
1.607.248.2000 (U.S. and Canada) +44.1244.525.320 (Europe) Email: opticalfibcs@corning.com