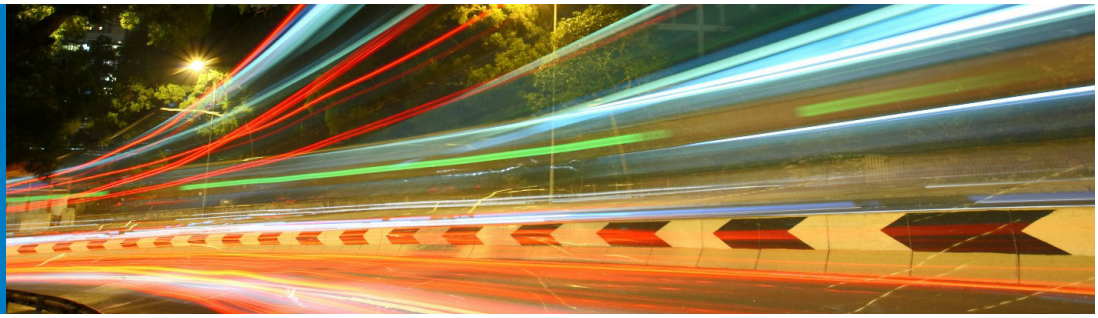
Corning® ClearCurve® Multimode Optical Fiber

Product Information

CORNING



Bend Performance and Compatibility

Corning® ClearCurve® ultra-bendable, laser-optimized™ multimode optical fiber delivers enhanced macrobending performance while maintaining compatibility with current optical fibers, equipment, practices, and procedures. ClearCurve® OM2, OM3, and OM4 multimode fibers are designed to withstand tight bends and challenging cabling routes with substantially less signal loss than conventional multimode fiber.

Standards Compliance	ClearCurve® OM4 fiber	ClearCurve® OM3 fiber	ClearCurve® OM2 fiber
ISO/IEC 11801	Type OM4 fiber	Type OM3 fiber	Type OM2 fiber
IEC 60793-2-10	Type A1a.3 fiber	Type A1a.2 fiber	Type A1a.1 fiber
TIA/EIA	492AAAD	492AAAC-B	492AAAB-A

Optical Specifications

Bandwidth

	High Performance EMB* (MHz·km)	Overfilled Modal Bandwidth** (MHz·km)	
Corning Optical Fiber	850 nm	850 nm	1300 nm
ClearCurve® OM4 fiber	4700	3500	500
ClearCurve® OM3 fiber	2000	1500	500
ClearCurve® OM2 fiber	950	700	500

*Ensured via minEMBc, per TIA/EIA 455-220A and IEC 60793-1-49, for high performance laser-based systems.
** OFL BW, per TIA/EIA 455-204 and IEC 60793-1-41.

Attenuation

Wavelength (nm)	Maximum Value (dB/km)
850	≤2.3
1300	≤0.6

No point discontinuity greater than 0.2 dB. Attenuation at 1380 nm does not exceed the attenuation at 1300 nm by more than 3.0 dB/km.

Macrobend Loss

Mandrel Radius (mm)	Number of Turns	Induced Attenuation (dB) 850 nm	1300 nm
15	2	≤0.1	≤0.3
7.5	2	≤0.2	≤0.5

Numerical Aperture

0.200 ± 0.015

Dimensional Specifications

Glass Geometry

Core Diameter	50.0 ± 2.5 µm
Cladding Diameter	125.0 ± 1.0 µm
Core-Clad Concentricity	≤1.5 µm
Cladding Non-Circularity	≤1.0%
Core Non-Circularity	≤5%

Coating Geometry

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

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.

Environmental Specifications

Environmental Test	Test Condition	Induced Attenuation 850 nm & 1300 nm (dB/km)
Temperature Dependence	-60°C to +85°C*	≤0.10
Temperature Humidity Cycling	-10°C to +85°C and 4% to 98% RH	≤0.10
Water Immersion	23°C ± 2°C	≤0.20
Heat Aging	85°C± 2°C	≤0.20
Damp Heat	85°C at 85% RH	≤0.20

*Reference temperature = +23°C
Operating Temperature Range: -60°C to +85°C

Mechanical Specification

Proof Test

The entire fiber length is subjected to a tensile stress ≥100 kpsi (0.69 GPa).*
*Higher proof test levels available

Length

Fiber lengths available up to 17.6 km/spool.

Performance Characterizations

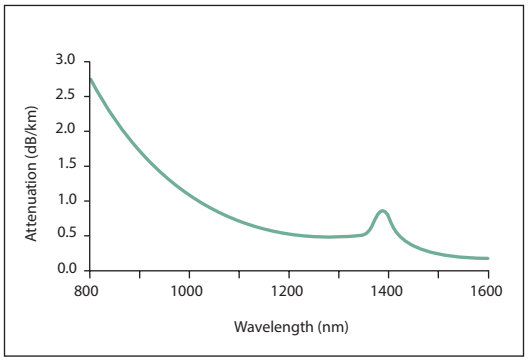
Characterized parameters are typical values.

Effective Group Index of Refraction (N_{eff})	850 nm: 1.482 1300 nm: 1.477
Fatigue Resistance Parameter (N_d)	20
Coating Strip Force	Dry: 0.6 lbs (2.7 N) Wet, 14 days in 23°C water soak: 0.6 lbs (2.7 N)

Chromatic Dispersion

Zero Dispersion Wavelength (λ_0): 1295 nm ≤ λ_0 ≤ 1315 nm
Zero Dispersion Slope (S_0): ≤ 0.101 ps/(nm^2*km)

Spectral Attenuation (Typical Fiber)



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