

Corning® ClearCurve® Multimode Optical Fiber

Product Information



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 fiber is 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
ITU	ITU G651.1	ITU G651.1	ITU G651.1

Optical Specifications

Bandwidth

Corning Optical Fiber	High Performance EMB* (MHz.km)	Overfilled Modal Bandwidth** (MHz.km)	
	850 nm only	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 ITA/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.

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%

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

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

Environmental Test	Test Condition	Induced Attenuation 850 & 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

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

Mechanical Specification

Proof Test

The entire fiber length is subjected to a tensile stress ≥ 100 kpsi (0.7 GN/m^2)*.

*Higher proof test levels available

Length

Fiber lengths available up to 17.6 km/spool.

Performance Characterizations

Refractive Index Difference

1%

Effective Group Index of Refraction (N_{eff})

850 nm: 1.482
1300 nm: 1.477

N_{eff} was empirically derived to the third decimal place using a specific commercially available OTDR

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): $1295 \text{ nm} \leq \lambda_0 \leq 1315 \text{ nm}$

Zero Dispersion Slope (S_0): $\leq 0.101 \text{ ps}/(\text{nm}^2 \cdot \text{km})$

Spectral Attenuation (Typical Fiber)

