

Corning® ClearCurve® OM2, OM3, and OM4 Optical Fibers

Product Information



Ultra-bendable and laser-optimized™, Corning® ClearCurve® multimode optical fibers deliver superior macrobending and bandwidth performance, ensured by the measurement of every kilometer sold. Built on Corning's reliability and award-winning quality, ClearCurve OM2, OM3, and OM4 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
IEC 60793-2-10	Type A1-OM4 fiber	Type A1-OM3 fiber	Type A1-OM2 fiber
TIA	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.

ColorPro® Identification Technology

ClearCurve® OM2, OM3, and OM4 fibers are also available in colored and ringmarked variants, enabled by ColorPro® identification technology. Corning fibers with ColorPro® identification technology deliver better efficiency in cable manufacturing, simplify inventory management, and leverage an enhanced product offering.

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%

*Improved geometry available upon request.

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./Can.)
+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 and 1300 nm (dB/km)
Temperature Dependence	-60°C to +85°C*	≤ 0.10
Temperature Humidity Cycling	-10°C to +85°C and up 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

*Reference temperature = +23°C

Mechanical Specifications

Proof Test

The entire fiber length is subjected to a tensile stress ≥ 100 kpsi (0.69 GPa). Higher proof test levels are 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): Zero Dispersion Slope (S_0):	1297 nm $\leq \lambda_0 \leq$ 1315 nm $\leq 4(-103)/(840(1-(\lambda_0/840)^4))$ ps/(nm ² •km)
Spectral Attenuation (Typical Fiber)	