

# 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*<br>(MHz•km) | Overfilled Modal Bandwidth**<br>(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%           |

### 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<br>850 nm and 1300 nm<br>(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

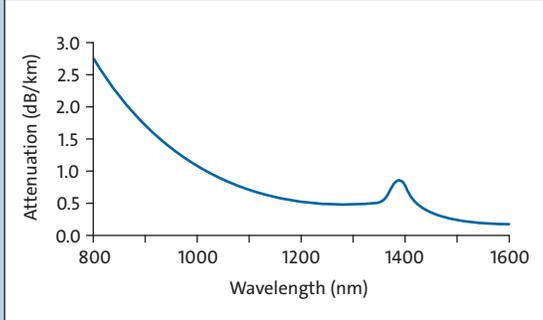
The entire fiber length is subjected to a tensile stress  $\geq 100$  kpsi (0.69 GPa). Higher proof test levels are available.

### 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<br>1300 nm: 1.477  |
| Fatigue Resistance Parameter ( $n_d$ )  | 20   |
| Coating Strip Force   | Dry: 0.6 lbs. (2.7 N)<br>Wet: 14 days in 23°C water soak: 0.6 lbs. (2.7 N)           |
| Chromatic Dispersion<br>Zero Dispersion Wavelength ( $\lambda_0$ ):<br>Zero Dispersion Slope ( $S_0$ ): | 1295 nm $\leq \lambda_0 \leq$ 1315 nm<br>$\leq 0.101$ ps/(nm <sup>2</sup> •km)       |
| Spectral Attenuation (Typical Fiber)  |  |