

CORNING

Corning® ClearCurve® Multimode Mid-Temperature Specialty Optical Fibers for Harsh Environments



Inquire for information about the application of mid-temperature coatings on glass with optical properties that match your application or custom need.

Multimode bend insensitive optical fiber with mid-temperature acrylate-based coatings

The Corning® ClearCurve® multimode bend insensitive fiber now includes even higher temperature and higher bandwidth capability. For use at temperatures up to 180°C and beyond, this acrylate-based fiber delivers incredible macro bend performance with ease of use and handling, benefiting sensing systems operating in harsh environments.

Applications

- Fiber sensing and data transmission with tight bend requirements and/or high bandwidth requirements for:
 - Telecom components requiring high temperature process and used in harsh environment applications.
 - Aerospace and Defense
 - Structural Health Monitoring
- Oil and gas pipelines continuous and real-time monitoring systems

Features

- Acrylate-base for ease of handling
- Rated for up to 180°C
- Test data available at 200°C
- Higher bandwidths available
- Hermetic coating (optional) for protection against hydrogen-induced attenuation increase and improved fatigue resistance
- Consistent strength over time at elevated temperatures
- A fiber designed to meet your specific needs with a recommended minimum bending radius of 7.5 mm
- Fully compliant with ITU-Recommendations G651.1, and compatible with current optical fibers and practices

Part Number	Coating Type
MM50BI-XMT	Mid-Temperature Acrylate
MM50BIH-XMT	Mid-Temperature Acrylate AND Hermetic

Key Optical Specifications	MM50BI-XMT and MM50BIH-XMT
Operating Wavelength (nm)	850, 1060, 1300
Maximum Attenuation (dB/km)	2.5 @ 850 nm 0.7 @ 1300 nm
Numerical Aperture	0.20 ± 0.015
Bandwidth (MHz-km)*	700 @ 850 nm 500 @ 1300 nm

*Higher bandwidths available, contact Corning representative

Key Geometric, Mechanical, and Environmental Specifications	
Core Diameter (µm)	50 ± 2.5
Cladding Outside Diameter (µm)	125 ± 2.0
Coating Outside Diameter (µm)	245 ± 10
Core-to-Cladding Concentricity (µm)	≤ 1.5
Lengths	Sold by the meter (500 m minimum)
Proof Test (kpsi)	200
Operating Temperature (°C)	-60 to +180
Coating	Mid-Temperature Acrylate Optional Hermetic Layer

Performance Characterizations [†]	
Refractive Index Profile	Graded Index
Recommended Minimum Bending Radius (mm)	7.5

[†]Values in this table are nominal or calculated values

For more information about Corning's leadership in specialty fiber technology, visit our website at [corning.com/specialtyfiber](https://www.corning.com/specialtyfiber). To obtain additional technical information, an engineering sample, or to place an order for this product, please contact us at:

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