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

CORNING

Single-mode bend insensitive optical fiber with mid-temperature acrylate-based coatings

The Corning® ClearCurve® Single-mode bend insensitive family of fibers now includes higher temperature capability. For use at temperatures up to 180°C and beyond, these acrylate-based fibers deliver the best macro bend performance in the industry with ease of use and handling; benefiting sensing systems operating in harsh environments.

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

Applications:

- Fiber Sensing and Data Transmission with tight bend requirements for:
  - Aerospace and Defense
  - Medical
  - Structural Health Monitoring
  - Down-Hole Drilling

Features:

- Acrylate-base for ease of handling
- Rated for up to 180°C
- Test data avaialble at 200°C
- Hermetic coating (optional) for protection against hydrogren induced attenuation increase and improved fatigue resistance
- Consistent strength over time at elevated temperatures
- A set of fibers designed to meet your small bend needs with recommended minimum bending radii of 5 mm
- Fully compliant with the stringent bend performance requirements of ITU-Recommendations G.657 and G652.D
- Compatible with Corning® SMF-28e® and SMF-28e+® fibers

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Part Number	Coating Type
SMBI-5-XMT	Mid-Temperature Acrylate
SMBIH-5-XMT	Mid-Temperature Acrylate AND Hermetic

Key Optical Specifications

	SMBI-5-XMT and SMBIH-5-XMT
Operating Wavelength (nm)	1310, 1550
Cabled Cutoff Wavelength (nm)	≤ 1260
Maximum Attenuation (dB/km)	0.38 @ 1310 nm 0.24 @ 1550 nm
Mode-field Diameter (µm)	8.6 ± 0.4 @ 1310 nm 9.65 ± 0.5 @ 1550 nm

Key Geometric, Mechanical, and Environmental Specifications

Cladding Outside Diameter (µm)	125 ± 1.0
Coating Outside Diameter (µm)	245 ± 10
Core-to-Cladding Concentricity (µm)	≤ 0.5
Lengths	Sold by the meter (500 m minimum)
Proof Test (kpsi)	100 or 200
Operating Temperature (°C)	-60 to +180
Coating	Mid-Temperature Acrylate Optional Hermetic Layer

Performance Characterizations*

Numerical Aperture	0.12
Recommended Minimum Bending Radius (mm)	5

*Values in this table are nomial or calculated values

For more information about Corning's leadership in Specialty Fiber technology, visit our website at 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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