CORNING

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

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

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

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.

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 available for 150 °C - 200 °C temperature range
- Hermetic coating (optional) for protection against hydrogen 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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Supersedes: April 2016

Key Optical Specifications

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

Key Geometric, Mechanical and Environmental Specifications

Cladding Outside Diameter (µm)	125 ± 1.0
Coating Outside Diameter (µm)	245 ± 10
Core-to-Cladding Offset (µm)	≤ 0.5
Lengths	Long lengths available (500 m minimum)
Proof Test (kpsi)	100 or 200
Operating Temperature (°C)	-60 to 180
Coating	Mid-Temperature Acrylate Optional Hermetic Layer

Performance Characteristics (values in this table are nominal or calculated)

Numerical Aperture	0.12
Recommended Minimum Bending Radius (mm)	5

Part Number Table

SMBIA-5-XMT

Single-Mode Bend Insensitive Optical Fiber with:

	Category	Definition	Product Code
A	Hermetic Indicator	Non Hermetic Hermetic	(blank) H

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:

Corning Incorporated
t +1-607-974-9974
f +1-607-974-4122
e specialtyfiber@corning.com

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