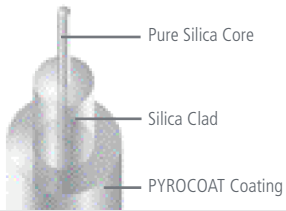


Specification Sheet

Single-Mode
GeoSil™-SM



GeoSil-SM fibers, made with a pure silica core and high 0.17 NA, offer extreme resistance to hydrogen plus low bend loss. The abrasion-resistant and chemically resistant PYROCOAT® polyimide coating allows performance to 300 degrees C for mechanical reliability in the down-hole environment.

GEOSIL-SM

Optical Properties

Operating wavelength	1550 nm
Cutoff wavelength	1440 nm ± 60 μm
Mode field diameter @ 1550 nm	7.8 ± 0.5 μm
Attenuation @ 1550 nm	≤1.0 dB/km
Bend loss @ 1550 nm (1 turn on a 10 mm diameter mandrel / FOTP-62)	≤0.10 dB
Numerical aperture (nominal)	0.17

Dimensions/Geometric Properties

Clad diameter	125 ± 2 μm
Coating/buffer diameter	155 ± 5 μm
Clad non-circularity	≤2%
Core/clad offset	≤1.0 μm
Coating diameter	155 ± 5 μm
Coating concentricity	≥80 %

Coating Descriptions

Coating material	PYROCOAT Polyimide
Operating temperature	-65 to +300°C

Mechanical and Testing Data

Bend radius:	Short-term	≥10 mm
	Long-term	≥15 mm
Proof test level		≥100 kpsi (0.689 GPa) or ≥ 200 kpsi (1.38 GPa) by special order

Order by Part Number: Location A	F21976
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Typical Applications	Distributed temperature sensing • High-temperature DTS • Datacom in harsh environments • Local area networks with elevated temperature requirements
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Options: Cabling, Connectorization, Metalization, Additional Coatings, Other Upgrades.

A AVON LOCATION (headquarters)

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1.860.678.0371 for all other
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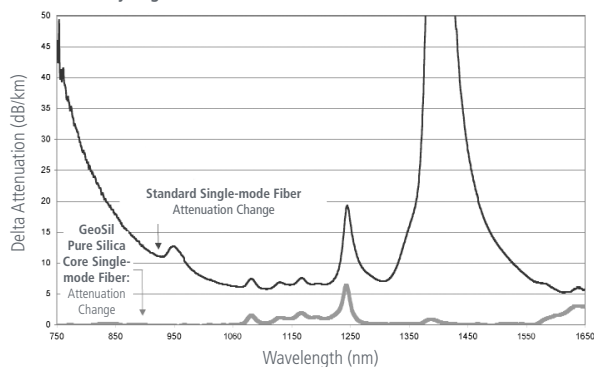
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10-0301

Hydrogen-Induced Attenuation: GeoSil-SM vs Standard SM



H₂ Soak Test Parameters for this test:
300-hour Duration at 215°C under 1500 psi*

*pressure measured and held when H₂ chamber was ramped to the full 215°C temperature

Alternate Test Parameters:

GeoSil-SM fibers were also tested separately at 100 psi of hydrogen at 280°C for 350 hours. Result was no measurable change in attenuation at 1550 nm.