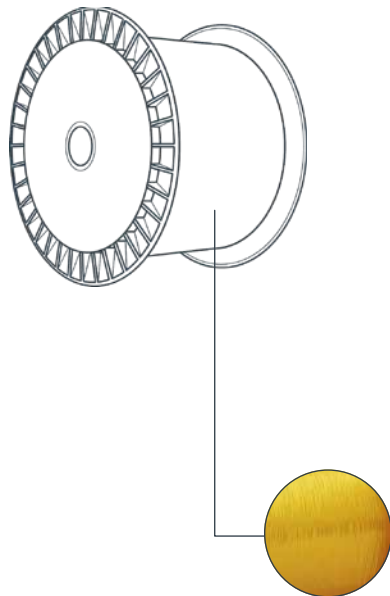




Hydrogen Insensitive Core Graded-Index Multimode 50 μm Optical Fiber

PYROCOAT[®] Coating: Part Number F78960



Features

Improved Waveguide Resists Hydrogen Darkening

Graded-Index 50/125 Fiber Structure

PYROCOAT[®] Coating

Benefits

Minimizes permanent losses due to hydrogen ingress in harsh conditions

Compatible with most commercially available Distributed Temperature Sensing (DTS) interrogators; can also be fusion spliced to similar hydrogen insensitive core optical fiber, and traditional lead-in optical fibers

Thin, hard coating provides excellent thermal stability, plus chemical and abrasion resistance in a small cross-section of 155 μm

Product Description

This optical fiber is designed for distributed temperature sensing and communications in applications where hydrogen diffusion is a concern, and in temperatures up to 250 °C for long durations (~ up to 20 years, performance and reliability will vary depending on installation environment. Consult OFS for guidance). The waveguide features a proprietary, hydrogen insensitive core structure to minimize the effects of hydrogen darkening and also features a thin, hard, polyimide coating for excellent chemical resistance and thermal stability at elevated temperatures.

Hydrogen Insensitive Core GI MM 50 Optical Fiber (PYROCOAT® Coating)

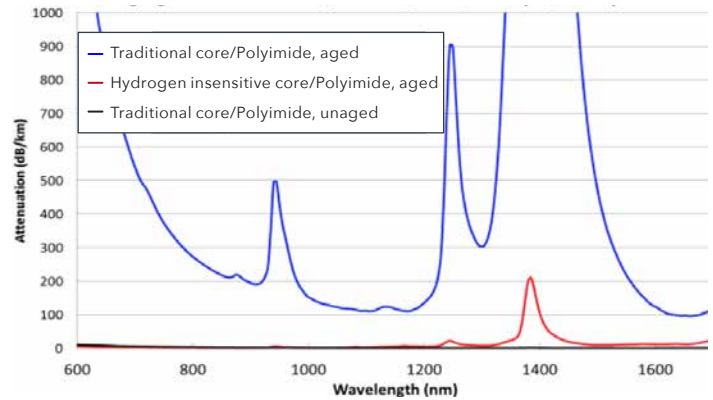
Specifications

Item Number	F78960	
Description	GEO50-H Geophysical Graded-Index Optical Fiber - Hydrogen Resistant, PYROCOAT®*	
Type	Multimode Graded-Index	
Numerical Aperture	0.20	
Attenuation	@ 850 nm	≤ 4.0 dB/km
	@ 1300 nm	≤ 2.0 dB/km
Bandwidth	OFL @ 850 nm	≥ 400 Mhz-km
	OFL @ 1300 nm	≥ 400 Mhz-km
Core Diameter	50 ± 3 μm	
Clad Diameter	125 ± 2 μm	
Coating Diameter	155 ± 5 μm	
Cladding Non-Circularity	≤ 2.0%	
Core Non-Circularity	≤ 5.0%	
Hermetic Carbon Layer	None	
Operating Temperature	-198 to +250 °C	
Short Term Excursions (24 Hours)	Up to 410 °C	
Coating Material	PYROCOAT	
Short-Term Bend Radius (Mechanical)	≥ 8 mm	
Long-Term Bend Radius (Mechanical)	≥ 10 mm	
Proof Test Level	200 kpsi (1.38 Gpa)	

* NOTE: Hydrogen diffusion performance curve on right

Proprietary, Hydrogen Insensitive Core Optical Fibers - Lower Sensitivity to H₂

Aging Condition: 5% H₂/95% N₂, 1500 psi, 200 °C, 10 days



Hydrogen Ingression Performance

Hydrogen Concentration	Partial Pressure (PSI)	Temperature (°C)	Duration (Days)	H ₂ Induced Loss @ 1060 nm
5%	1,500	250	23	< 1.0 dB/km
5%	1,500	350	10	< 1.0 dB/km

For additional information please contact your sales representative.

You can also visit our website at www.ofsoptics.com or call 1-888-fiberhelp (1-888-342-3743) USA or 1-770-798-5555 outside the USA.

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