



Single-mode Optical Fiber with PYROCOAT® for Low and High Temperature Applications

P/N: F78910

Features	Thin, hard polyimide coating
Benefits	Provides excellent thermal stability over wide operating temperatures, plus chemical and abrasion resistance in a cross- section of only 155 μm.
Product Description	This optical fiber is designed for Brillouin-based Distributed Strain and Temperature Sensing (DSTS), Rayleigh-based Distributed Acoustic Sensing (DAS) and communications in applications where thermal stability in low and high temperatures is necessary. This fiber is suitable for long duration use in temperatures ranging from -196 °C to 250 °C. (up to 20 years, performance and reliability will vary depending on installation environment. Consult Lightera for guidance). The waveguide is single-mode and intended for operation at 1310 and/or 1550 nm windows, featuring a proprietary thin, hard, polyimide coating for excellent chemical resistance and thermal stability at elevated temperatures.

Product Specifications	
Product Description	Single-mode with PYROCOAT for Low and High Temperature Applications
Physical Characteristics	
Core Material	Ge Doped Synthetic SiO ₂
Cladding Material	SiO ₂
Coating Material	Pyrocoat
Core/Clad Offset	≤ 0.5 μm
Cladding Diameter	125 ± 1 μm
Clad Non-Circularity	≤ 2.0%
Coating Diameter	155 ± 5 μm
Coating Concentricity	≥ 80%
Optical Characteristics	
Type	Single-mode
Fiber Cutoff Wavelength	≤ 1310 nm
Mode Field Diameter @ 1310 nm	8.9 ± 0.4 μm
Mode Field Diameter @ 1550 nm	10.0 ± 0.5 μm
Attenuation @ 1310 nm	≤ 0.7 dB/km
Attenuation @ 1550 nm	≤ 0.6 dB/km
Mechanical and Environmental	
Operating Temperature	-65 to +300 °C
Proof Test Level	≥ 200 kpsi (1.38 GPa)
Order by Part Number	F78910
OPTIONS	For special requests please consult Lightera at 1-888-fiberhelp (1-888-342-3743) USA or 1-770-798-5555 outside the USA.
Contact Information	For additional information please contact your sales representative. You can also visit our website at www.lightera.com or call 1-888-FIBERHELP (1-888-342-3743) USA or 1-770-798-5555 outside the USA. For a full list of our certifications, visit our website.
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