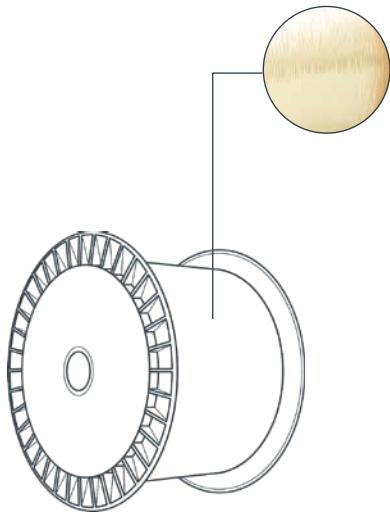




**Wide Temperature
AllWave[®] FLEX Zero Water Peak (ZWP)
Single-Mode Fiber**
PYROCOAT[®] K Coating: Part Number F81255

PYROCOAT K



Features

PYROCOAT K Coating Industry-Leading Thermal Stability.

Wide Operating Temperature Range

Single-mode Fiber Structure

AllWave FLEX ZWP Design

Benefits

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

Suitable for long-term use over a wide range of temperatures.

Compatible with most commercially available Distributed Acoustic Sensing (DAS), Distributed Strain Sensing (DSS), Distributed Temperature Sensing (DTS) and Distributed Strain and Temperature Sensing (DSTS) interrogators.

Meets or exceeds ITU-T G.657. A and G652.D specifications. This bend-optimized fiber offers enhanced bend performance for tight, low loss bends over the entire 1260 to 1625 nm wavelength range. Fully compatible and splice-able to traditional single-mode optical fibers.

Product Description

This optical fiber is designed for DAS, DSS, DTS and DSTS and communications in applications where fibers will be continuously exposed to temperatures up to 293 °C for long durations (~ up to 20 years, performance and reliability will vary depending on installation environment. Consult OFS for guidance). The table below provides more information on life expectancy in various harsh condition use cases. continuously exposed to temperatures up to 293 °C for long durations (~ up to 20 years, performance and reliability will vary depending on installation environment. Consult OFS for guidance). The table below provides more information on life expectancy in various high temperature use cases.

Visit our website at www.ofsoptics.com

AlliWave® FLEX ZWP Single-Mode Fiber with PYROCOAT® K Coating

Specifications

Item Number	F81255
Type	Single-Mode
Performance Characteristic	G657.A1
Bend Performance	Bend-Optimized
Physical Characteristics	
Clad Diameter	125.0 ± 1.0 µm
Clad Non-Circularity	≤ 2%
Core/Clad Concentricity Error	≤ 0.5 µm
Coating Descriptions	
Operating Temperature	-65 to +300
Short-Term Temperature Excursions (24 hrs.)	Up to 450 °C
Coating Diameter	155 ± 5 µm
Coating Concentricity	≥ 80%
Coating Material	PYROCOAT K
Mechanical Data	
Short-Term Bend Radius	≥ 5 mm
Long-Term Bend Radius	≥ 9 mm
Proof Test Level	200 kpsi (1.38 GPa)
Optical Characteristics	
Attenuation	
@ 1310 nm	≤ 0.50 dB/km
@ 1550 nm	≤ 0.40 dB/km
Attenuation Uniformity/Point Discontinuities at 1310 and 1550 nm	
	≤ 0.05 dB
Group Refractive Index at 1310 nm	1.467
Group Refractive Index at 1550 nm	1.468
Mode Field Diameter at 1310 nm	8.5 to 9.3 µm
Mode Field Diameter at 1550	9.5 to 10.5 µm
Fiber Cutoff Wavelength	≤ 1300 nm

	Commercially Available Polyimide-Coated Fibers	PYROCOAT® K
Lifetime at 275 °C	4 years	80 years
Lifetime at 300 °C	0.8 years	13 years
Lifetime at 325 °C	70 days	2.2 years
Lifetime at 350 °C	18 days	160 days
20-year Continuous Upper Use Temperature	250 °C	293 °C
Fiber/Metal Interaction at 300 °C	Fiber sticks to metal	Fiber does not stick to metal
Aging in distilled water, 200 °C, 2000 psi, 7 days	Coating material degrades	No coating degradation
Aging in sea water, 100 °C, 2000 psi, 14 days	No coating degradation	No coating degradation
Aging in mineral oil, 250 °C, 2000 psi, 10 days	No coating degradation	No coating degradation
Aging in isopropanol, 250 °C, 1500 psi, 7 days	No coating degradation	No coating degradation

NOTE: The lifetimes are based on 25% loss of the initial coating mass criterion. For details, see A. A. Stolov, D. A. Simoff, J. Li, Thermal Stability of Specialty Optical Fibers. *J. Lightwave Technol.*, 2008, V 26, N 20, P. 3443-3451.

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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