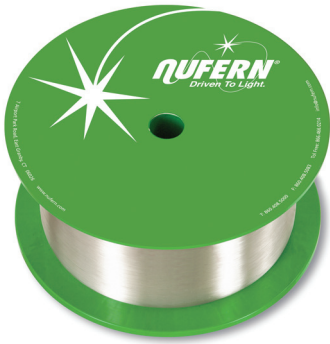


Specialty Multi-Mode Radiation Resistant Fibers



Nufern's radiation resistant specialty multi-mode fibers are designed to operate for extended periods of time on low earth orbits, near and deep space, and in applications where risk of exposure to man-made radiation is great. As with the traditional Nufern MM fiber, these fibers are capable of withstanding extreme environments and large and fast temperature swings. Features include step index and graded index configurations, numerical apertures from 0.06 to 0.45 and core sizes from 10 μm to 700 μm . All fibers are available with a high temperature acrylate, silicone, or polyimide coating.

Typical Applications

- Airframe, spacecraft, missile and UAV optical interconnects
- Large bandwidth tactical cables
- Robust duty in extreme military and classified environments

Features & Benefits

- Radiation resistance — Useful in radiation environments.
- Operate over wide frequency range — One fiber serves broad applications
- Exceptional uniformity and core/clad concentricity — Minimize fiber induced signal artifacts
- Higher proof test levels — Longest life expectancy
- Tight diameter control — Lowest cost deployments

Optical Specifications

Operating Wavelength (nominal)	
Numerical Aperture	
Bandwidth	
Bandwidth	
Attenuation	
Attenuation	

GR 50/125-23-HTA

Operating Wavelength (nominal)	800 – 1350 nm
Numerical Aperture	0.23 \pm 0.015
Bandwidth	\geq 1000 MHz-km @ 850 nm
Bandwidth	\geq 300 MHz-km @ 1300 nm
Attenuation	\leq 3.5 dB/km @ 850 nm
Attenuation	\leq 1.2 dB/km @ 1300 nm

GR 62.5/125-27-HTA

Operating Wavelength (nominal)	800 – 1350 nm
Numerical Aperture	0.275 \pm 0.015
Bandwidth	\geq 160 MHz-km @ 850 nm
Bandwidth	\geq 500 MHz-km @ 1300 nm
Attenuation	\leq 3.5 dB/km @ 850 nm
Attenuation	\leq 0.9 dB/km @ 1300 nm

GR 100/140-24-HTA

Operating Wavelength (nominal)	800 – 1350 nm
Numerical Aperture	0.24 \pm 0.02
Bandwidth	\geq 200 MHz-km @ 850 nm
Bandwidth	\geq 200 MHz-km @ 1300 nm
Attenuation	\leq 7.0 dB/km @ 850 nm
Attenuation	\leq 5.0 dB/km @ 1300 nm

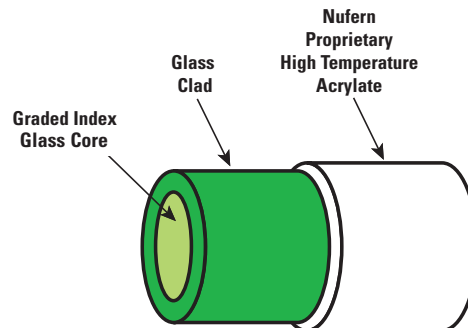
Geometrical & Mechanical Specifications

Core Diameter	
Clad Diameter	
Coating Diameter	
Core-Clad Concentricity	
Coating Material	
Core Type	
Operating Temperature	
Short-Term Bend Radius	
Long-Term Bend Radius	
Proof Test Level	

Core Diameter	50 \pm 3 μm
Clad Diameter	125 \pm 2 μm
Coating Diameter	245 \pm 15 μm
Core-Clad Concentricity	< 3 μm
Coating Material	Dual Layer, High Temperature Acrylate
Core Type	Graded Index, Radiation Resistant
Operating Temperature	- 55 to + 125 p C
Short-Term Bend Radius	\geq 12 mm
Long-Term Bend Radius	\geq 25 mm
Proof Test Level	\geq 100 kpsi (0.7 GN/m ²)

Core Diameter	62.5 \pm 3 μm
Clad Diameter	125 \pm 2 μm
Coating Diameter	245 \pm 15 μm
Core-Clad Concentricity	< 3 μm
Coating Material	Dual Layer, High Temperature Acrylate
Core Type	Graded Index, Radiation Resistant
Operating Temperature	- 55 to + 125 p C
Short-Term Bend Radius	\geq 12 mm
Long-Term Bend Radius	\geq 25 mm
Proof Test Level	\geq 100 kpsi (0.7 GN/m ²)

Core Diameter	100 \pm 4 μm
Clad Diameter	140 \pm 3 μm
Coating Diameter	245 \pm 15 μm
Core-Clad Concentricity	< 5 μm
Coating Material	Dual Layer, High Temperature Acrylate
Core Type	Graded Index, Radiation Resistant
Operating Temperature	- 55 to + 125 p C
Short-Term Bend Radius	\geq 14 mm
Long-Term Bend Radius	\geq 30 mm
Proof Test Level	\geq 100 kpsi (0.7 GN/m ²)



RoHS

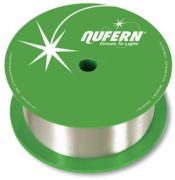


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