Rad Hard | Fibers

For more than a decade iXblue has developed a unique know-how in the design of optical fibers in radiative environments such as nuclear power plants, high energy physics labs, nuclear waste repository sites and even all the way into space. iXblue develops and maintains a comprehensive product line of fibers designed to fit many of such applications. Our fibers can be used for data transmission, sensing or experiment monitoring.

More fibers are available on stock and we have furthermore the ability to custom design your fiber based on your specific application. Do not hesitate to contact us with your specific technical requirements.

Key Features
- Low radiation induced attenuation
- Low bending losses
- Chemical core compositions adapted to each radiative environment
- Large choice of coatings for harsh environments
- Outstanding mechanical protection

Applications
- Nuclear Environment
- High energy physics
- Space

Example of Fibers

Multimode Fiber for temperature sensing in nuclear environment

Graded Index Profile	Fluorine dope silica	Geometrical Specifications	
Core Composition:		Core Diameter (µm)	50
Operational Wavelength (nm)	1064	Fiber Diameter (µm)	125
Attenuation (dB/km)	< 5	Numerical Aperture	0.12

Singlemode Fiber for sensing/data transmission in nuclear environment

Step Index Profile		Geometrical Specifications	
Core Composition:	pure silica	Core Diameter (µm)	7
Operational Wavelength (nm)	1310 / 1550	Fiber Diameter (µm)	125
Attenuation (dB/km)	< 1	Numerical Aperture	0.14

UV grade Multimode Fiber for High Energy Physics (Plasma Diagnostic)

Graded Index Profile		Geometrical Specifications	
Core Composition:	Fluorine dope silica	Core Diameter (µm)	250
Operational Wavelength (nm)	351	Fiber Diameter (µm)	300
Attenuation (dB/m)	< 0.15	Numerical Aperture	0.12
Dispersion (ps/m)	< 1	Other Geometry available: 105/125, 400/450 µm	