Polyimide | Fibers

For nuclear environment and high energy physics

Most deployed optical fibers are designed to be used in friendly environments usually with temperatures ranging from -40 to +85°C. For these fibers, acrylate coatings are typically used but are not adequate for temperature above 85°C. For applications were optical fibers are to withstand long term exposure to high temperature, iXblue has formulated a coating package based on polyimides which provides outstanding long term protection
Polyimide coated fibers can be used at temperatures up to 350°C for short time and 300°C permanently. Polyimide coating also provides protection against many chemicals and is a coating of choice when it comes to radiation exposure.

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
- Operating temperature long term up to 300 °C
- Operating temperature short term up to 350 °C
- Outstanding mechanical protection

Applications
- High temperature sensing
- Oil and gas
- Nuclear environment

Main Specifications for Polyimide fibers

Product Name	Core diameter (µm)	Attenuation @1310 nm (dB/km)	Attenuation @1550 nm (dB/km)	MFD (µm)	Cutoff wave-length	Core NA	Cladding diameter (µm)	Coating diameter (µm)
IXF-SM-1550-125-0.14-PI	7 +/- 0.5	< 1.0	< 0.8	9 +/- 1	< 1310	0.14	125 +/- 2 80 +/- 2 on request*	155 +/- 5
IXF-SM-1550-125-0.17-PI	6.5 +/- 0.5	< 1.2	< 1.0	8 +/- 1	< 1310	0.17	125 +/- 2 80 +/- 2 on request **	155 +/- 5

* Product name for 80 µm cladding diameter: IXF-SM-1550-80-PI-0.14
** Product name for 80 µm cladding diameter: IXF-SM-1550-80-PI-0.17

Weibull failure probability of IXF-SM-1550-125-PI fiber