

## SPECIALTY OPTICAL FIBER

# IXF-RAD-MMSI-L-105-125-022

## Multimode Radiation Hardened Multimode Fiber

Radiation hardened optical fibers are designed to mitigate the effects of Radiation Induced Attenuation (RIA) and extend the fiber's lifetime when used in radiative environments. Leveraging a decade of investments in R&D and research collaborations, Exail offers singlemode and multimode radiation hardened fibers for use in harsh environments with high radiation levels and/or extreme temperatures.

Step-index multimode fibers are available with low-OH, mid-OH and high-OH content depending on the operating wavelength range. Other coatings and geometries are available upon request.



### Benefits & Features

- Ø105 µm core, Ø125 µm cladding
- Radiation hardened fiber
- 0.22 numerical aperture, step-index profile
- Low-OH content, optimized for VIS-NIR operation

### Applications

- Diode pigtailling
- High power delivery
- Pump combiner manufacturing
- Spectroscopy

### Related Products

- IXF-RAD-MMSI-L-105-125-022-HT HT acrylate coating
- IXF-RAD-MMSI-L-105-125-022-PI Polyimide coating

### Parameters

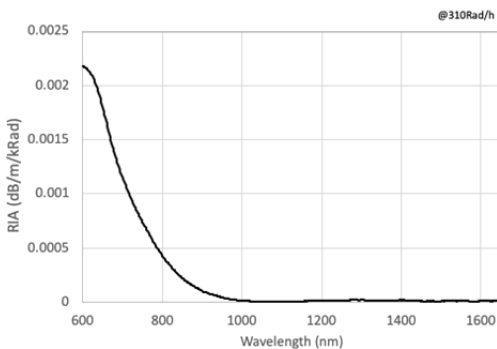
Core diameter (µm)	105 ± 3
Cladding diameter (µm)	125 ± 2
Numerical aperture	0.22 ± 0.02
Background losses (800-1300nm) *	≤ 10
Core/Clad concentricity (µm)	≤ 2.0
Coating diameter (µm)	245 ± 15
Proof test level (kpsi)	100
RIA (dB/m) over 900 - 1000 nm ** @100 kRad, Gamma-rays, 300 Rad/h, room temperature	≤ 0.2

\* 150 mm bending diameter

\*\* RIA = Radiation Induced Attenuation

### Design parameters

Core material	Pure silica core
OH content	Low-OH
Coating material	Dual acrylate
Operating temperature range (°C)	-60 to +85
Cladding shape	Circular



Typical RIA characteristics of the IXF-RAD-MMSI-L-105-125-022 fiber, 100 kRad, 310 Rad/h, Gamma-rays (Co-60 source), room temperature.

Exail reserves the right to change, at any time and without notice, the specifications, design, function or form of its products described herein.

contact.photonics@exail.com | www.exail.com  
Europe +33 1 30 08 94 50 | Americas +1 508 745 3487 | APAC +60 11 1623 1698

**exail**