

## SPECIALTY OPTICAL FIBER

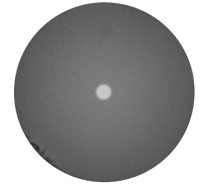
# IXF-SM-1550-80-024-PI

## Single Mode Fiber

The IXF-SM family regroups singlemode fibers designed for operation from UV to NIR wavelengths. Available with different cladding diameter, numerical aperture, and coating material, a wide range of singlemode fibers are available.

The IXF-SM-1550-80-024-PI fiber is designed for singlemode operation at 1550 nm. With a 80  $\mu\text{m}$  cladding diameter and high numerical aperture, it offers low bending loss and high mechanical reliability when coiled to tight diameters.

Polyimide offers excellent performance both at cryogenic and high temperatures up to +300 °C. Exail's high quality polyimide coating enables large numbers of femtosecond FBG to be inscribed with high yield directly through the coating for sensing applications.



### Benefits & Features

- 1550 nm singlemode operation
- $\varnothing 80 \mu\text{m}$  cladding diameter
- Operation from cryogenic temperatures to +300 °C
- High numerical aperture
- Low macrobending loss
- High mechanical reliability under tight bending
- High-quality polyimide coating
- Other diameters and coatings available upon request

### Applications

- Sensing
- FBG inscription

### Related Products

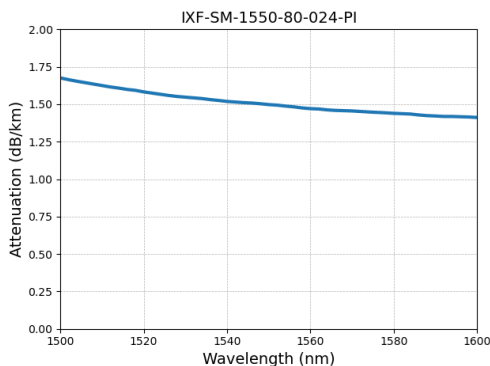
- IXF-SM-1550-80-016  $\varnothing_{\text{clad}} 80 \mu\text{m}$ , NA 0.16
- IXF-SM-1550-80-019  $\varnothing_{\text{clad}} 80 \mu\text{m}$ , NA 0.19
- IXF-SM-1550-80-022  $\varnothing_{\text{clad}} 80 \mu\text{m}$ , NA 0.22
- IXF-SM-1550-80-019-PI  $\varnothing_{\text{clad}} 80 \mu\text{m}$ , Polyimide

### Parameters

Cutoff wavelength (nm)	< 1450
Attenuation @1550 nm (dB/km)	< 1.75
Mode field diameter @1550 nm ( $\mu\text{m}$ )	5.3 $\pm$ 1
Numerical aperture	0.24 $\pm$ 0.01
Core/Clad concentricity ( $\mu\text{m}$ )	< 0.75
Cladding diameter ( $\mu\text{m}$ )	80 $\pm$ 1
Coating diameter ( $\mu\text{m}$ )	110 $\pm$ 5
Proof test level (kpsi)	100

### Design parameters

Coating material	Polyimide
Operating temperature range (°C)	-60 to +300
Bending loss $\varnothing 15 \text{ mm}$ @1550 nm (dB/turn)	< 0.1



Typical attenuation spectrum of the IXF-SM-1550-80-024-PI fiber.

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

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