

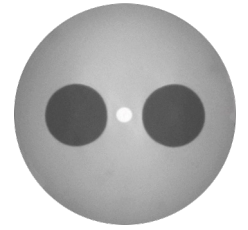
IXF-PHO-CMF-PM

Photosensitive Single-Mode Fiber

The IXF-PHO family of photosensitive fibers are designed to offer excellent performance for FBG inscription. These fibers feature extremely low residual birefringence and repeatable photosensitivity, making them an ideal choice for high reflectivity chirped FBG with bandwidth greater than 2 nm or for dispersion compensation gratings.

Cladding Mode Free (CMF) fibers are designed to eliminate cladding modes, offering a near-perfect reflection profile.

Other operating wavelength and coatings are available upon request.



Benefits & Features

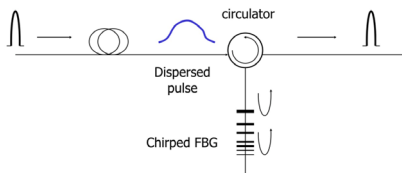
- Excellent cladding mode suppression
- Low splice loss to standard SMF and PMF fibers
- PM panda

Applications

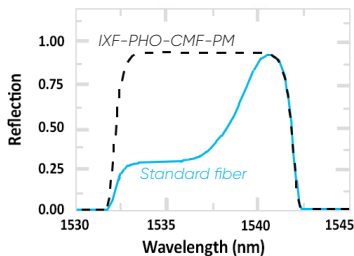
- Bi-directional high reflectivity broadband filter
- Bi-directional interrogation of FBG array
- Chirped FBG with negative dispersion
- Dispersion compensation

Related Products

- IXF-PHO-CMF-LPR Cladding Mode Free, non-PM version



Example of dispersion compensation design using a chirped FBG and long wavelength input to achieve negative dispersion.



Reflection spectrum of a chirped FBG using the long wavelength input to achieve negative dispersion. CMF fibers such as the IXF-PHO-CMF-PM are specially designed to suppress cladding modes.

Parameters

Cutoff wavelength (nm)	≤ 1450
Attenuation @1550 nm (dB/km)	≤ 0.5
Core diameter (μm)	8.2 ± 0.5
Mode field diameter @1550 nm (μm)	10.5 ± 1
Cladding diameter (μm)	125 ± 2.5
Numerical aperture	0.13 ± 0.01
Core/Clad concentricity (μm)	≤ 1
Coating diameter (μm)	245 ± 15
Proof test level (kpsi)	100
Group birefringence	≥ 1 × 10 ⁻⁴

Design parameters

Coating material	Dual acrylate
Operating temperature range (°C)	-60 to +85
Design	Panda
Splice loss to SMF (dB)	≤ 0.07
Cladding modes (dB) FBG > 30dB	≤ 0.2
Static fatigue corrosion	n ≥ 20
Tensile strength (GPa)	≥ 3.5

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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