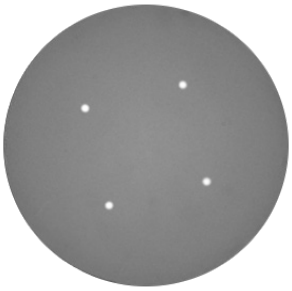
SPECIALTY OPTICAL FIBER

IXF-MC-4-EDF-FGC-980

Multicore fiber



The IXF-MC family of multicore fibers includes both passive and active fibers with 2, 4, 7 and 12 cores. Multicore fibers are used in a large variety of applications such as Space Division Multiplexing (SDM) and sensing (temperature, strain, or shape sensing). Passive multicore fibers have photosensitive cores, allowing Fiber Bragg Gratings (FBG) to be inscribed to the cores.

Custom developments of passive, active, or spun multicore fibers are possible.

Benefits & Features

- 4-core Erbium doped fiber
- C-band operation
- Uncoupled cores
- Matching 4-core passive fiber available
- Custom designs possible

Applications

- Space division multiplexing (SDM)

Related Products

- IXF-MC-4-SM-1060 (4-core passive fiber)

Related Publications

- Y. Wakayama, N. Yoshikane, and T. Tsuritani, "FIFO-less Core-pump Combiner for Multicore Fiber Amplifier," in Optical Fiber Communication Conference (OFC) 2021, P. Dong, J. Kani, C. Xie, R. Casellas, C. Cole, and M. Li, eds., OSA Technical Digest (Optica Publishing Group, 2021), paper M3D.3.
- Y. Wakayama, N. Yoshikane and T. Tsuritani, "FIFO-less Core-pumped Multicore Fibre Amplifier with Fibre Bragg Grating based Gain Flattening Filter," 2022 European Conference on Optical Communication (ECOC), Basel, Switzerland, 2022, pp. 1-4.

Parameters

Core number	4
Core Position Shape	Square
Core spacing (µm)	44 ± 1
Cutoff wavelength (nm)	< 970
Absorption @1480 nm (dB/m)	2.0 - 2.5
Absorption @1530 nm (dB/m)	5.3 - 6.6
Background losses(dB/km)	< 8
Core diameter (µm)	3.2 ± 0.5
Mode field diameter @1550 nm (µm)	6.5 ± 0.5
Numerical aperture	0.21 ± 0.02
Cladding diameter (µm)	125 ± 1.5
Coating diameter (µm)	245 ± 15
Proof test level (kpsi)	100

Design parameters

Operating wavelength (nm)	> 980
Coating material	Dual acrylate
Operating temperature range (°C)	-40 to +85

PSD-L-Q-E-086 L

IXF-MC-4-EDF-FGC-980_edD_21092023

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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