SPECIALTY OPTICAL FIBER

IXF-PZG-780-125

Polarizing Fiber

Exail Polarizing (PZ) fiber is designed so that only one state of polarization is guided along the fiber; any other state of polarization will be lost rapidly thus yielding a high built-in polarization extinction ratio. This particular mechanism is obtained through a specific waveguide design and a careful optimization of the glass composition resulting in both high birefringence and leakage behavior.

PZ fibers are available at different wavelengths with a broad polarizing window (typically larger than 100 nm), low attenuation and high extinction ratio (≥ 30 dB), that can be tuned by coiling the proper fiber length at the appropriate coil diameter.

If needed Exail also offers ready to use polarizing solutions based on PZ fibers.

Benefits & Features

- All-fiber polarizer
- Coiled operation
- Polarizing wavelengths availabe: 780, 840, 980, 1060, 1310 or 1550 nm
- Fiber diameter: 80 or 125 µm
- Tiger design
- > 100 nm polarizing window
- > 30 dB extinction ratio

Applications

- Quantum optics, cold atoms
- All-Fiber polarizer
- Fiber optic current sensors and gyros

Parameters

20 dB fast edge* (nm)	< 730
3 dB slow edge* (nm)	> 830
Extinction ratio (dB)	< -30
Attenuation @780nm (dB/km)	< 20
Mode field diameter @780nm (µm)	6 ± 2
Numerical aperture	0. 11 ± 0.01
Core/Clad concentricity (µm)	< 1
Cladding diameter (µm)	125 ± 2
Coating diameter (µm)	245 ± 15
Proof test level (kpsi)	100

Design parameters

Operating wavelength (nm)	780
Design	Tiger
Core shape	Round
Coating material	Dual acrylate
Operating temperature range (°C)	-40 to +85

Comments:
**Typical polarization performance with deployment conditions of 5m length in a 80mm coil.*

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