

# IXF-PZG-1053-125

## 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 ( $\geq 30$  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 available: 780, 840, 980, 1060, 1310 or 1550 nm
- Fiber diameter: 80 or 125  $\mu\text{m}$
- 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)	$< 1015$
3 dB slow edge* (nm)	$> 1105$
Extinction ratio (dB)	$< -30$
Attenuation @1053nm (dB/km)	$< 20$
Mode field diameter @1053nm ( $\mu\text{m}$ )	$8 \pm 2$
Numerical aperture	$0.11 \pm 0.01$
Core/Clad concentricity ( $\mu\text{m}$ )	$< 1$
Cladding diameter ( $\mu\text{m}$ )	$125 \pm 2$
Coating diameter ( $\mu\text{m}$ )	$255 \pm 10$
Proof test level (kpsi)	100

### Design parameters

Operating wavelength (nm)	1053
Design	Tiger
Core shape	Round
Coating material	Dual acrylate
Operating temperature range ( $^{\circ}\text{C}$ )	$-40$ to $+85$

Comments:

*\*Typical polarization performance with a length of 5 meters*

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