

## SPECIALTY OPTICAL FIBER

# IXF-PMG-820-80-EC

## Polarization Maintaining Fiber for Gyroscope

The IXF-PMG family includes high performance Polarization Maintaining Fibers that are specifically designed for integration into Fiber Optic Gyroscopes on or above the earth.

Fiber diameter control is critical during coil winding: our fibers exhibit very high consistency / accuracy of the coating diameter not only in each batch, but also from batch to batch.



### Benefits & Features

- Panda & tiger designs available
- Qualified by international inertial sensing manufacturers
- Design for space environment available
- Highly birefringence
- High polarization extinction in coiled applications
- Zero twist
- Round core
- Cladding diameter: 40, 80, 125  $\mu\text{m}$ , other diameters on request
- Various coating diameters, tuned to customers specifications
- High stability coating diameter along each batch and from batch to batch

### Applications

- Fiber optic gyroscope

### Parameters

|  |                  |
|--|------------------|
| Cutoff wavelength (nm)                       | < 750            |
| Attenuation @780nm (dB/km)                   | < 10             |
| Beat length @780nm (mm)                      | < 3              |
| Mode field diameter @820nm ( $\mu\text{m}$ ) | $3.2 \pm 0.5$    |
| Numerical aperture                           | $0.215 \pm 0.02$ |
| Core/Clad concentricity ( $\mu\text{m}$ )    | < 1              |
| Cladding diameter ( $\mu\text{m}$ )          | $80 \pm 1$       |
| Coating diameter ( $\mu\text{m}$ )           | $170 \pm 5$      |
| Proof test level (kpsi)                      | 100              |

### Design parameters

|  |                     |
|--|---------------------|
| Operating wavelength (nm)                          | 780                 |
| Design   | E-Core              |
| Holding parameter @820nm ( $\text{m}^{-1}$ )       | < $3 \cdot 10^{-5}$ |
| Coating material                                   | Dual acrylate       |
| Operating temperature range ( $^{\circ}\text{C}$ ) | -40 to +85          |

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

**exail**