

**iXblue**



# Gyroscope PM Fibers

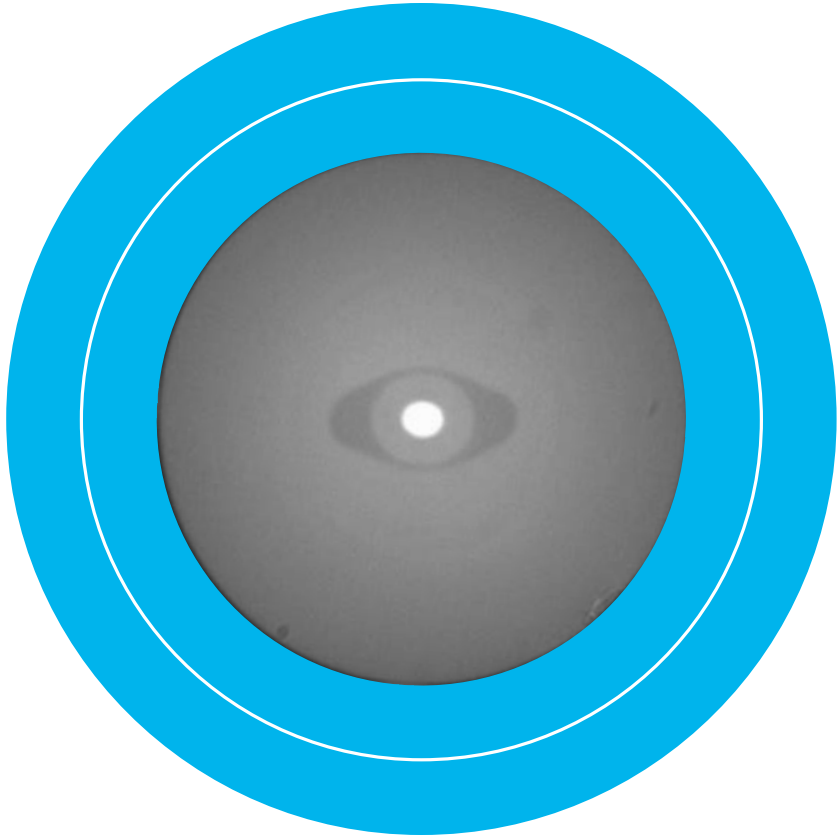
Cutting-edge fibers

**IXF-PMG-BC-1550-80-019(-LS)**

2016-ed1.0

# Gyroscope PM Fibers

## Overview



- Qualified by international inertial sensing manufacturers
- Tiger design  
also known as elliptical clad design
- High throughput process

# Gyroscope PM Fibers

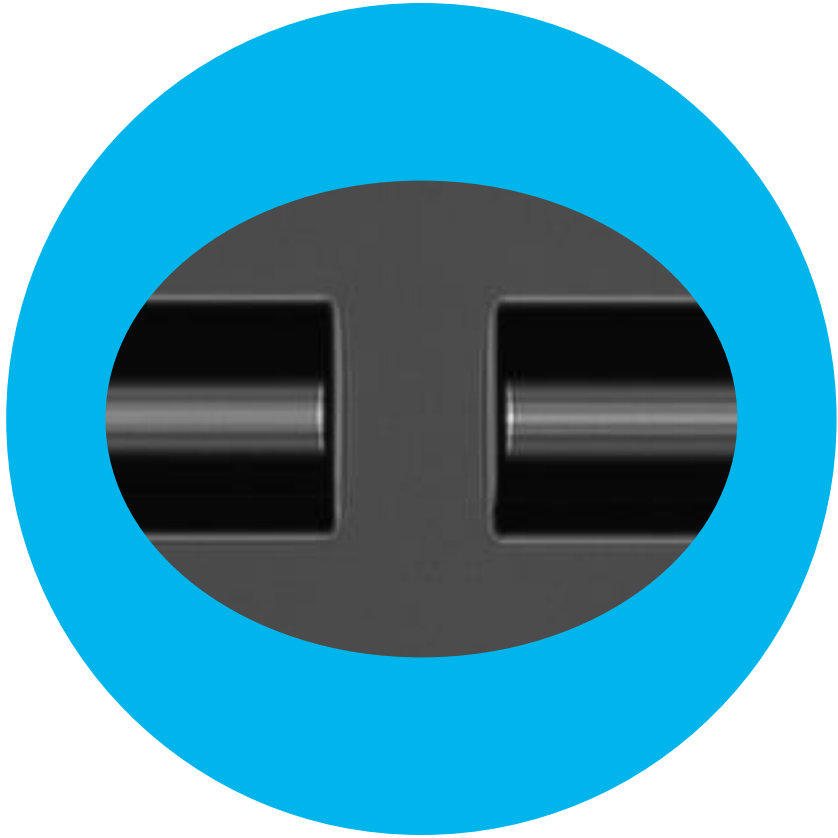
## Overview



- High birefringence
- High polarization extinction ratio  
in coiled applications
- Low attenuation  
typical value: 0.7 dB/km
- Bend insensitive

# Gyroscope PM Fibers

## Overview



- Round core
- Fine alignment and splicing capability
- Zero twist
- High stability coating diameter along each batch and from batch to batch

# Gyroscope PM Fibers

## Main specifications

## Optical specifications

Product name	Operating wavelength (nm)	Cut-off wavelength (nm)	Core NA $\pm 0.01$	MFD @1550 nm ( $\mu\text{m}$ ) $\pm 0.5$	Attenuation @1550 nm (dB/km)	Beat length @633 nm (mm)	H-parameter @1550 nm
IXF-PMG-BC-1550-80-019	1500 - 1600	< 1480	0.19	6.7	< 1.4 (typical 0.7)	< 1.5	< $3 \cdot 10^{-5}$
IXF-PMG-BC-1550-80-019-LS	1500 - 1600	< 1480	0.19	6.7	< 1.4 (typical 0.7)	< 1.5	< $3 \cdot 10^{-5}$

# Gyroscope PM Fibers

## Main specifications

### Geometrical & mechanical specifications

Product name	Cladding diameter (µm) ± 1	Outer coating diameter (µm) ± 2	Core-cladding concentricity (µm)	Coating Concentricity (µm)	Coating material	Proof test level (kpsi)
IXF-PMG-BC-1550-80-019	80	170	< 1	< 5	UV cured, dual acrylate	100
IXF-PMG-BC-1550-80-019-LS	80	128	< 1	< 5	UV cured, dual acrylate	100

# Gyroscope PM Fibers

The devil is in the details

- Tight control of fiber diameter on each batch  
Coating diameter labeled on each spool
- Minimized fiber twist for low Faraday Effect  
Easier fiber winding without any fiber jump
- Reduced coating fiber diameter for Low Shupe Effect

**A lot of small things that make life (and coil winding) easier**