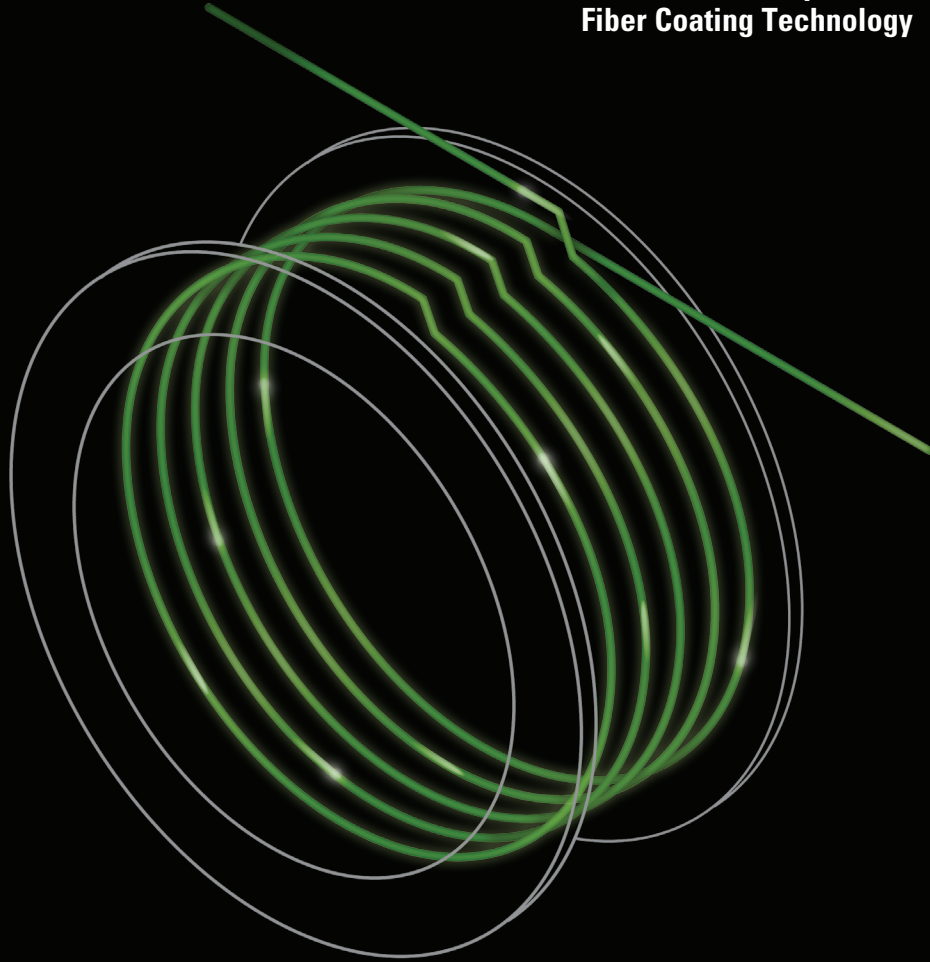


# **NUGYRO™**

**With New & Improved  
Fiber Coating Technology**

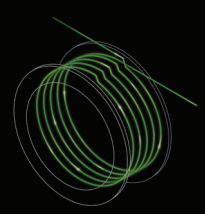


## **Fibers Spinning Light**

### **Optical Fibers for Gyroscope Coils**

Nufern offers a broad range of fibers for fiber optic gyroscopes including our latest high performance (HP) versions optimized for smallest diameter and exceptional splicability. We specialize in PANDA and Elliptical Clad designs and have a custom portfolio including SM and PM Gyroscope fibers. All products have very tight dimensional tolerances and use our proprietary coating critical for manufacturing highest precision, high-performance gyro-coils. Nufern Gyro fibers especially pure silica core SM versions have very high levels of radiation resistance suitable for myriad applications. Our Panda-style PM Gyro fibers have extremely high birefringence, negligible mode field perturbations and low cross-talk for maximum competitive advantage.





### Optimized Fiber Coating Technology

Nufern has developed its own proprietary fiber coating optimized for gyroscope applications. This new proprietary NuCOAT-LTg coating offers improved crosstalk performance and is optimized for Nufern's world class fiber draw process.

### Optical Features & Benefits

- Low bend loss - Lowest power consumption and longest coil lengths
- Low mode field perturbation along length - Minimizes crosstalk
- Hi birefringence - Minimizes crosstalk
- Available in high performance (HP) versions optimized for improved repeatability, coil winding accuracy, and ultra-low splice loss

### Mechanical Features & Benefits

- Very high fatigue failure resistance  $n_f \sim 23$  – Ensures long life in tough conditions
- COST218 model based life expectancy of > 130 years with 25 mm bend radius and 5 km fiber
- Standard glass/polymer diameters as small as 40/90  $\mu\text{m}$  – For max fiber length on a small coil diameter

Product Number	Core Diameter	Cladding Diameter	Coating Diameter	$\varnothing$ Coating Tolerance	NA	Beat Length @ 633 nm	Cross Talk for 100 nm	h-Parameter ( $\times 10^{-5}$ )	Special Features
<b>Wavelength 1550 nm</b>									
S1550-80	7.8 $\mu\text{m}$	80 $\mu\text{m}$	125 $\mu\text{m}$	$\pm 5 \mu\text{m}$	0.160	N/A	NA	N/A	SM Radiation Hard
S1550-80-HTA									
S1550-HTA		125 $\mu\text{m}$	245 $\mu\text{m}$	$\pm 15 \mu\text{m}$					
PM1550G-40/90-5	4.0 $\mu\text{m}$	40 $\mu\text{m}$	90 $\mu\text{m}$	$\pm 5 \mu\text{m}$	0.220	$\leq 1.5 \text{ mm}$	$\leq -20.0 \text{ dB}$	$\leq 10.0 \text{ m}^{-1}$	Small Clad & Coating
PM1550G-80/135-2HP	5.9 $\mu\text{m}$	80 $\mu\text{m}$	135 $\mu\text{m}$	$\pm 2 \mu\text{m}$	0.190	$\leq 1.2 \text{ mm}$	$\leq -25.0 \text{ dB}$	$\leq 3.0 \text{ m}^{-1}$	High Performance, Thin Coating
PM1550G-80/170-5	5.5 $\mu\text{m}$		170 $\mu\text{m}$	$\pm 5 \mu\text{m}$	0.200				Standard
PM1550G-80/170-2HP	5.9 $\mu\text{m}$		$\pm 2 \mu\text{m}$	0.190	High Performance				
<b>Wavelength 1300 nm</b>									
PM1300G-80/135-2HP	5.2 $\mu\text{m}$	80 $\mu\text{m}$	135 $\mu\text{m}$	$\pm 2 \mu\text{m}$	0.180	$\leq 1.2 \text{ mm}$	$\leq -25.0 \text{ dB}$	$\leq 3.0 \text{ m}^{-1}$	High Performance, Thin Coating
PM1300G-80/170-5	5.0 $\mu\text{m}$			$\pm 5 \mu\text{m}$					Standard
PM1300G-80/170-2HP	5.2 $\mu\text{m}$		170 $\mu\text{m}$	$\pm 2 \mu\text{m}$					High Performance
PME1300G-80/170-5	6.0 $\mu\text{m}$			$\pm 5 \mu\text{m}$					Elliptical-Clad
<b>Wavelength 850 nm</b>									
PM850G-80/135-2HP	3.1 $\mu\text{m}$	80 $\mu\text{m}$	135 $\mu\text{m}$	$\pm 2 \mu\text{m}$	0.155	$\leq 1.2 \text{ mm}$	$\leq -25.0 \text{ dB}$	$\leq 3.0 \text{ m}^{-1}$	High Performance, Thin Coating
PM850G-80/170-5	3.5 $\mu\text{m}$			$\pm 5 \mu\text{m}$	0.160				Standard
PM850G-80/170-2HP	3.1 $\mu\text{m}$		170 $\mu\text{m}$	$\pm 2 \mu\text{m}$	0.155				High Performance
PME850G-40/100-5	3.5 $\mu\text{m}$	40 $\mu\text{m}$	100 $\mu\text{m}$	$\pm 5 \mu\text{m}$	0.180	$\leq 2.0 \text{ mm}$ @ 850nm	$\leq -25.0 \text{ dB}$ @ 633nm	$\leq 5.0 \text{ m}^{-1}$	Elliptical-Clad