

FOG1500 Extra high Dynamic Range Closed-loop Fiber Optic Gyroscope

Mini Size Gyro



FOG1500 is one device designed with the best performance of the dynamic range; up to 1500deg/sec Operating at the wavelength of 1550nm, this waveband the light transmits with the lowest insertion loss. The gyro ASE light source has a high output power together with the good wavelength stability. This state-of-the-art closed loop fiber optic gyroscope (FOG) designed and developed entirely in-house. The FOG Photonics delivers superior precision and reliable performance at lower cost and smaller size than other comparable gyros, especially other FOGs.

Product features

- Closed loop fiber optic gyroscope
- High accuracy, low noise sensor
- All "Solid State" containing no moving parts
- Digital and/or Analog output Available as 1-2-3-4 axes configuration
- High resolution Low latency Lightweight package
- Temperature modeled Reduced magnetic sensitivity
- Provisions for extra processing capabilities
- Ruggedized packaging
- Great performance with harsh dynamic conditions

Applications

The FOG solutions are versatile and suitable for a wide variety of demanding applications such as:

- Navigation
- Missile and Torpedoe guidance
- Flight controls
- UUV/UAV/ Target Drones guidance and control
- Gyro compassing / target acquisition systems
- Camera/mapping
- AHRS
- Motion compensation
- EO/FUR/Radar stabilization
- Line-of-sight tracking / Precision pointing
- Smart munitions
- Gimbal control

Specifications

Parameter	Units	FOG1500
Angular Random Walk (noise)*	°/hr	0.07
Bias stability	°/hr	≤0.1(10s,1σ)
Bias Repeatability (day to day)	°/hr(1σ)	0.1
Scale factor repeatability	ppm(1σ)	≤50
Scale Factor Non-Linearity (max rate, 25°C)	ppm,(1σ)	≤50
Dynamic Range (Angular Rate)	°/sec	±1500
Band width	HZ	>100
Dimension	mm	68.5x68.5x32
Weight	g	270g
Magnetic field sensitivity	/hr/Gs	< 0.005 ° /hr/Gs
Operation temperature	°C	-50-+80
Storage temperature	°C	-55-+85
Shock	g	40g, 11 msec, sawtooth
Vibrations	g	16g(20-1500HZ)
Interface		RS422 Or OEM
Power supply	V	±5V
Power consumption	W	<5W
MTBF	Hours	20000
Baud Rate**	Kbps	Typ 460.8kbps (User selectable 9.6 Kbps to 921.6 Kbps)
Data Rate***	Hz	Typ 500Hz (User Selectable 1 to 1000 Hz)

Note:

* Random Walk determined by Allan variance method

,*:Optional Parameter for Customer