



**GC3DG02**

**3 AXES GYROSCOPE**

# GC3DG02 3 AXES GYROSCOPE

Size	44 mm x 45 mm x 28.8 mm
Weight	< 75 g
Power Consumption	< 1.5 W
Operating Temperature Range	[-40 , +85] (°C)
Data Rate	12 kHz filtered angular rate (other frequencies available) 4 kHz compensated $\Delta\Theta$ s (other frequencies available)
Gyro Operating Range	Varies by configuration up to 10.800 deg/sec
Supply Voltage	5 $\pm$ 0.25 V
Timing Stability	< 2.5 ppm

**ITAR FREE**

## GC3DG02 IMU STANDARD MODELS & PERFORMANCE

DEVICE	GYRO BIAS REPEATABILITY <sup>1</sup> (°/HR 1 $\sigma$ )	GYRO BIAS IN-RUN STABILITY <sup>2</sup> (°/HR 1 $\sigma$ )	ARW <sup>3</sup> (°/√HR MAX)
GC3DG02	20 (varies by configuration down to 1)	1.0 (varies by configuration down to 0.05)	0.25 (varies by configuration down to 0.05)

## GC3DG02 IMU TYPICAL PERFORMANCE OVER FULL OPERATING TEMPERATURE RANGE

DEVICE	GYRO BIAS REPEATABILITY <sup>1</sup> (°/HR 1 $\sigma$ )	GYRO BIAS IN-RUN STABILITY <sup>2</sup> (°/HR 1 $\sigma$ )	ARW <sup>3</sup> (°/√HR MAX)
GC3DG02	5 (varies by configuration down to 0.5)	0.5 (varies by configuration down to 0.02)	0.125 (varies by configuration down to 0.025)

GC3DG02 is a general name of high precision 3 axes gyroscope family that employs MEMS based sensors and can be used for precise guidance, control, stabilization, and navigation. Compared to fiber optic and laser based gyroscope modules, GC3DG02 has lower cost, smaller size, lower mass, lower power, higher availability, and comparable accuracy. It can work in harsh environments and does not require periodic maintenance.

Angular data collected from this 3 axes gyro module is used for creating inertial navigation systems for unmanned aerial vehicles, missiles, and autonomous vehicles, and generating feedback for stabilization, and control loops for these systems. Hence, GC3DG02 is to be used in guidance, control, navigation, and stabilization systems for Aerial, Land, Naval, and Submersible vehicles.

