LCG50

MEMS Quartz Angular Rate Sensor

Ideal for Industrial and Marine Applications

- Vehicle Instrumentation
- Robotics
- Flight Testing
- Guidance & Control Systems
- Short Term Navigation
- Ride Control - Stabilization

Key Performance Features:

- **Proven MEMS Technology**
- **DC Voltage Output**
- **Wide Bandwidth**
- **Analog Voltage Output**
- **Low Power Consumption**
- **High Reliability**
- **Wide Operating Temperature Range**
- **Small Size**
- **Fast Start-Up**
- **DC in DC out**
- **Temperature Sensor Output**

The LCG50 (Low Cost Gyro 50) offers a MEMS (Micro Electro Mechanical System) single axis angular rate sensor on a small PC board. The sensor is a complete unit and requires only a single DC voltage input to measure angular rate. The LCG50 is ideally suited for embedded applications, where mounting versatility is required, unit price is low, robustness is essential, and the performance characteristics must match that of much more expensive instrument grade rate sensors.

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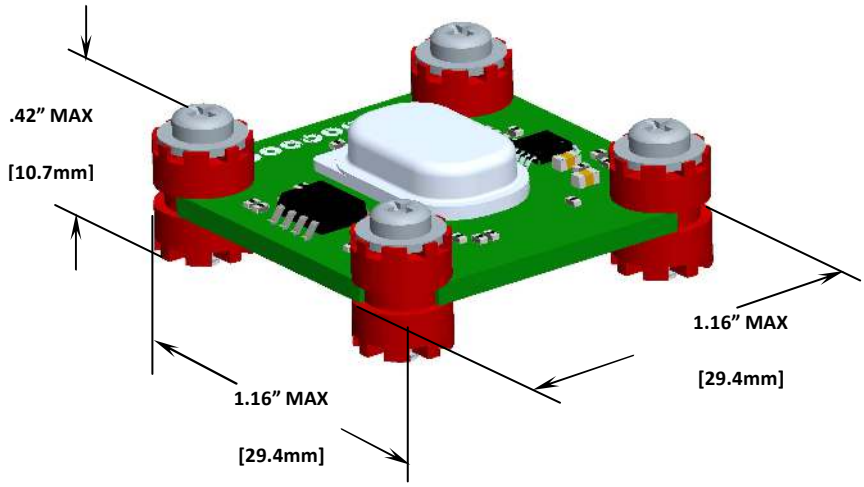
	LCG50-00020-100	LCG50-00100-100	LCG50-00250-100	LCG50-00500-100
Power Requirements				
Input Voltage	+5.0 Vdc			
Input Current	< 8 mA @ +5.0 Vdc			
Performance				
Standard Range Full Scale	± 20°/sec.	± 100°/sec.	± 250°/sec.	± 500°/sec.
Scale Factor Calibration (at 22°C)	50 mV/°/sec ± 15%	16 mV/°/sec ± 15%	6.4 mV/°/sec ± 15%	3.2 mV/°/sec ± 15%
Scale Factor over Temperature	< 0.1%/°C			
Bias Calibration (at 22°C)	+2.5 Vdc ± 0.6 Vdc	+2.5 Vdc ± 0.2 Vdc	+2.5 Vdc ± 0.6 Vdc	+2.5 Vdc ± 0.6 Vdc
Bias Variation over Temperature	10°/sec.	8°/sec.	10°/sec.	20°/sec.
G Sensitivity (Typical)	< 0.05°/sec/g			
Start-Up Time (Typical)	< 2.0 sec.			
Bandwidth (-3 dB)	> 50 Hz			
Non-Linearity (% Full Range)	< 0.05%			
Output Noise (DC to 100Hz)	≤ 0.005°/sec./√Hz	≤ 0.005°/sec./√Hz	≤ 0.006°/sec./√Hz	≤ 0.01°/sec./√Hz
Temperature Sensor				
Scale Factor	6.25 mV/°C Typical			
Output Voltage at 0°C	+424 mV Typical			
Environments				
Operating Temperature	-40°C to +85°C			
Storage Temperature	-55°C to +100°C			
Vibration Operating*	5 g_{rms}			
Vibration Survival*	10 g_{rms}			
Shock	500g PK ½ sine 2 msec			
Weight	< 0.4 oz. [12 grams]			

* Please see user's guide for more information regarding vibration tolerance and sensitivity.



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A brand of CST