G200 Dual Axis Gyro

- **Small G200 MEMS Dual Axis Gyro**
- **Very Low Noise** *<0.002°/sec/√Hz (100 °/s)*
- **Short Term Bias** *≤0.0014°/sec 2σ*
- **Bias Over Temperature** *≤0.1°/sec 2σ*
- **G-Sensitivity** *≤0.005°/sec/g Typical*
- **Axis Alignment** *<8mrad Typical*
- **Low Power** *< 10 mA Typical*
- **Bipolar Output Signal**
- **Light Weight** *< 34 grams*
- **Low Voltage** *+5V (single sided power)*
- **Bandwidth** *200Hz*
- **Voltage Output**
- **Internal Temperature Sensor**
- **Self Test**
- **Shock Resistant** *500g*
- **Vibration** *6 gRMS*
- **High MTBF**

Small Ultra Low Noise Dual Axis MEMS Gyro

Export Classification: Commerce ECCN7A994

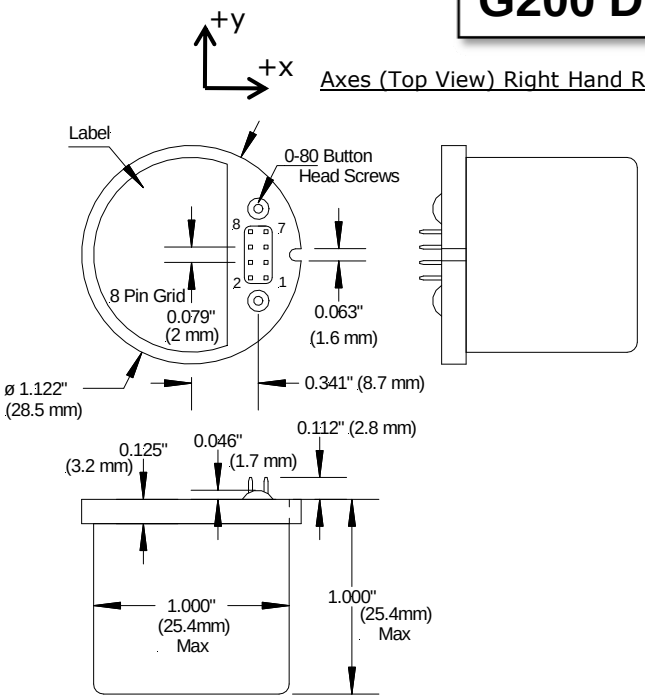
The all new G200 Dual Axis MEMS Gyro represents Gladiator's breakthrough gyro technology enabling an ultra low noise MEMS gyro and bandwidth of 200Hz that has performance commensurate with much more expensive **small Dynamic Tuned Gyros.** It also features industry leading bias in-run and bias over temperature. Designed for commercial stabilization and aircraft applications, the gyro has a bipolar signal outputting balanced 0V ± 5V. The **signature features of the G200 are very low noise** 0.002°/sec/√Hz**, bandwidth of 200Hz,** short term bias of 0.0014°/sec as well as impressive bias over temperature, low power, light weight, as well as excellent g-sensitivity and misalignment. The unit is highly durable and can withstand environmental vibration and shock typically associated with commercial stabilization and aerospace requirements. The MEMS G200 gyro is offered at 100°/s or 300°/s rate range. The gyro is designed for platform and antenna stabilization and pointing, commercial aircraft applications, automotive testing,, general aviation and laboratory use. The G200 is ideal where very low noise, excellent bias over temperature performance, low power consumption, low g-sensitivity, light weight and rugged durability are desired for commercial environments and applications. Thermal model available - consult factory.

QMS
AS9100 Rev B &
ISO 9001:2000
Cert# FM 509639

Gladiator Technologies, Inc.

Rev. Feb0711
SN: 100

G200 Dual Axis Gyro



Axes (Top View) Right Hand Rule

G200 Dual Axis Gyro
G200-100-100 G200-300-100

Preliminary Specification

PARAMETER	*G200 Dual Axis Gyro*	
	G200-100-100	G200-300-100
Power Requirements		
Input Voltage	+5V DC (±5%)	
Input Current *Typical (Max)*	10mA (14mA)	
Performance		
Standard Full Scale Ranges	±100°/sec	±300°/sec
Full Scale Output *(Nominal)*	0V ±4.9V DC	
Scale Factor *Nominal*	40mV/°/sec	12mV/°/sec
Scale Factor Over Temperature	±0.05%	
Temperature Sensor	1.5V ±0.05V DC Nominal at 25°C	
Temperature Sensor Scale Factor	20mV/°C Nominal	
Bias Factory Set *2σ*	≤0.05°/sec	≤0.15°/sec
Bias Variation Over Temperature *1σ*	≤0.1°/sec	≤0.3°/sec
Short Term Bias Stability *1σ (150 sec at constant temp.)*	≤0.0014°/sec	≤0.002°/sec
°/hr	5°/hr	15°/hr
Long Term Bias Stability *(1 Year)*	≤0.1°/sec	≤0.3°/sec
G-Sensitivity *2σ*	≤0.005°/sec/g	
Axis Alignment *(Typical)*	<8mrad	
Start-Up Time	<0.5 sec	
Bandwidth (-3 dB)	200 Hz	
Non-Linearity *(of Full Range)*	≤0.25%	
Threshold/Resolution	≤0.001°/sec	
Output Noise *(Typical)*	0.002°/sec/√Hz	0.003°/sec/√Hz
Environments		
Operating Temperature	-40°C to +85°C	
Storage Temperature	-55°C to +100°C	
Vibration Operating	6 gRMS (20Hz to 2KHz)	
Shock	500g, any axis 30msec 1/2 sine	
Weight	< 34 grams	

Pin No.	Pin Assignment
1	X Gyro Rate Output Voltage 0V *Nominal*
2	Gyro Temp +1.5V @ 25°C 20mV/°C
3	Power Ground
4	Y Gyro Rate Output Voltage 0V Nominal
5	+4.75V to +5.25V DC Input
6	Signal Ground
7	Self Test Input 3.3V nominal
8	Case

Rate output is Pin 1 with respect to Pin 6. Temperature is Pin 2 with respect to Pin 6. Self Test On is 3.3V on Pin 7. Self Test Off is open or < 1V. Loads <100pf & >5k on pins 1 & 4 and >10k on pin 2

Specification subject to change without notice

Gladiator Technologies, Inc.

Gladiator Technologies, Inc.
8022 Bracken Place SE
Snoqualmie, WA 98065 USA
Tel: 425.396.0829 Fax: 425.396.1129
Email: sales@gladiatortechnologies.com
Web: www.gladiatortechnologies.com

Rev. Feb0711
SN: 100