

# FIBER OPTIC GYROSCOPE VG103D

## SPECIFICATION

| <b>POWER REQUIREMENTS</b>       |           |               |   |
|---------------------------------|-----------|---------------|---|
| Voltage (single supply)         | V         | +4.75 to 5.25 | regulated                                       |
| Supply Current                  | A         | 0.15          | min   |
| <b>PERFORMANCE</b>              |           |               |   |
| Input range                     | °/s       | 350           | for info  |
| Scale factor (SF)               | mV/°/s    | 6.5           | ±15%  |
| Bandwidth                       | kHz       | 0.3 / 1       | RS232 (default) / RS422                         |
| Angular Random Walk (ARW)       | °/√h      | 0.02          |   |
| Output Noise PSD                | μV/√Hz    | 2             |   |
| Bias, RMS                       | °/h       | 1             | Allan variance min                              |
| Bias Offset                     | mV        | <0.1          | typical   |
| Bias OTR                        | μV/°C     | ±1            | for info  |
| SF, RMS                         | %         | 0.02          | In run, day-to-day                              |
| SF OTR                          | %/°C      | -0.03         | typical   |
| Initialization                  | s         | 1             |   |
| Dissipation                     | W         | 0.8           | @ 20°C (typical)                                |
| <b>ELECTRICAL INTERFACE</b>     |           |               |   |
| Data rate                       | kHz       | 1.2 / 4.8     | RS232 (default) / RS422, 24-bit data            |
| Baud rate                       | kBd       | 115 / 920     | RS232 (default) / RS422, asynchronous           |
| <b>PHYSICAL PARAMETERS</b>      |           |               |   |
| Dimensions                      | mm        | 63 x 63 x 22  | ISO 2768-m tolerance                            |
| Weight                          | gram      | 60            | approx.   |
| Volume                          | cl        | 7             |   |
| Housing material                |           | hard plastic  |   |
| Ingress protection class        |           | IP67          |   |
| <b>ENVIRONMENT</b>              |           |               |   |
| Temperature (operating)         | °C        | -40...+70     | built-in sensor                                 |
| Temperature (endurance)         | °C        | -55...+85     | 2 h min, non-operating                          |
| Vibration, RMS (endurance)      | g         | 12            | 20 Hz... 2000 Hz                                |
| Output Noise on vibration       | μV/g·Hz   | 5             | typical (0.1-1kHz), @NTE 0.2 g <sup>2</sup> /Hz |
| Acceleration (operational)      | g         | 50            |   |
| Shocks                          | g         | 350           | 1 ms half-sine                                  |
| Magnetic response               | °/h/Gauss | 2             | typical (X axis)                                |
| <b>RELIABILITY</b>              |           |               |   |
| MTBF                            | h         | 100 000       | humidity conditions applied                     |
| Lifetime                        | yr        | 15            | humidity conditions applied                     |
| <b>Temperature sensor TMP36</b> |           |               |   |
| Scale Factor                    | mV/°C     | 10            |   |
| Output Voltage                  | mV        | 750           | @25°C   |