

**Green Technologies**  
**For a Safer and Better Living**  
**In Smart City**



### Fiber Bragg Grating Accelerometer (Model#: OAC-100)

- Fiber Bragg Grating-based accelerometer is designed for high precision vibration measurement with an accuracy better 0.1 G\* under wide temperature operation range of -20 °C – 80 °C. This sensor is particular suitable for vibration measurement in transportation, energy as well as civil and structure industries. The sensor employs two FBGs and therefore thermal effect can be completely isolated with this differential output configuration. Wavelength of 1550nm with standard operational measurement range of +/- 30 G is available. (\*Depends on interrogator wavelength measurement accuracy)

### Features

- High Sensitivity
- Series Connection with Other Sensors
- Wide Operational Temperature Range
- Self Temperature Compensated
- Custom Measurement Range Available

| Specification                 |  |
|-------------------------------|--|
| <b>PERFORMANCE PROPERTIES</b> |  |
| Operation Wavelength          | 1550 nm                                |
| Sensitivity                   | 24 pm/G typ. (single FBG) <sup>1</sup> |
| Measurement Range             | +/- 30 G                               |
| Resolution                    | 0.1 G                                  |
| Operation Frequency           | DC – 300 Hz (+/- 5% of sensitivity)    |
| Maximum Operation Shock       | 100 G                                  |
| Operation Temperature         | -20 °C – 80 °C                         |
| <b>PHYSICAL PROPERTIES</b>    |  |
| Dimension (W x D x H)         | 67 mm x 30 mm x 13 mm                  |
| Weight                        | 70 g                                   |
| Material                      | Steel / Aluminium Alloy                |
| Fastening Method              | M3 Screws/ Epoxy                       |
| <b>OPTICAL PROPERTIES</b>     |  |
| FBG Peak Reflectivity         | >70 %                                  |
| FBG FWHM (-3 dB)              | 0.25 nm (+/- 0.5 nm)                   |
| FBG Isolation <sup>3</sup>    | >15 dB                                 |
| Optical Fiber Type            | SMF-28e compatible                     |
| Cable Length                  | 1 m (other on request)                 |
| Cable Type                    | 3 mm in-door cable (other on request)  |
| Optical Connector             | 2 x FC/APC (other on request)          |

1 Sensor with single FBGs configuration  
2 Typical value for single FBG configuration, dual FBGs configuration is available on request.  
3 At +/- 0.4 nm of center wavelength.

\*The Company reserves the right to make any changes without prior notice.

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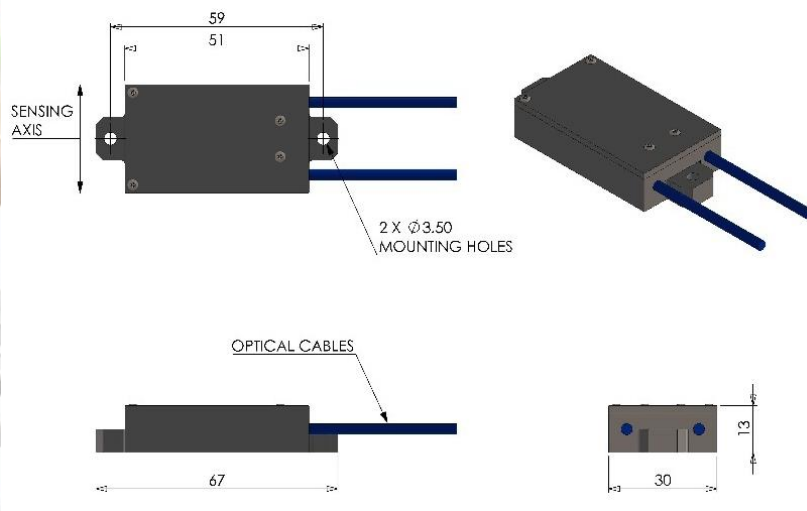
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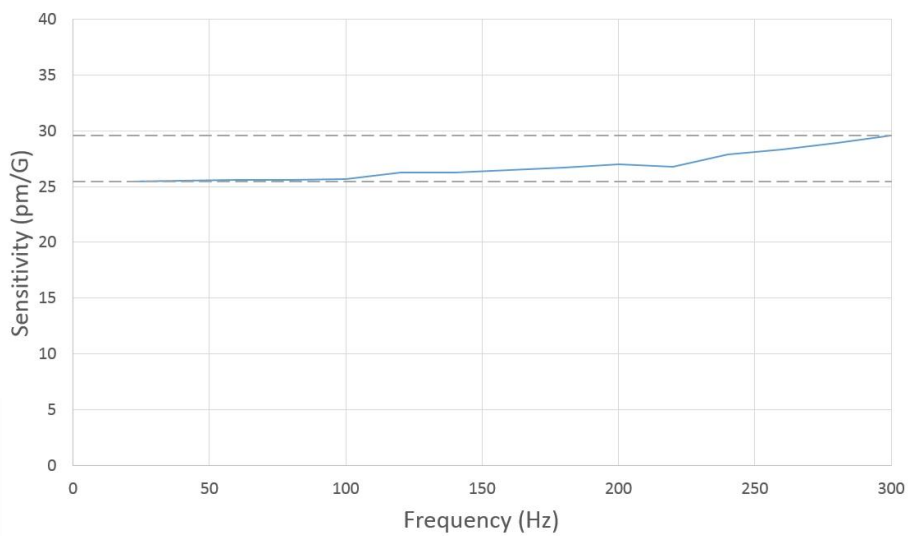
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**DIMENSIONS**



**TYPICAL PERFORMANCE**

Frequency Response Curve



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