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optical sensing

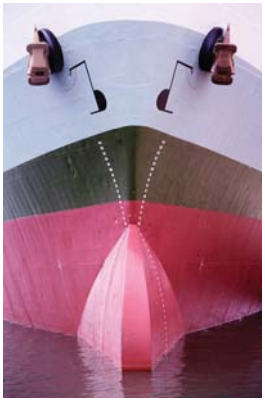
Fiber Optic Accelerometer | os700-721

PRELIMINARY

Applications

Long-Term Monitoring, Risk and Damage Assessment of:

- **Civil Structures/Civionics (Bridges, Dams, Tunnels, Buildings, Support Members)**
- **Energy (Transmission Lines, Structures)**
- **Aerospace**
- **Oil & Gas (Platform and Structure Monitoring)**
- **Marine Vessels**
- **Transportation (railways, Roadways)**



Description

The **os700-721** is a 0 to 1KHz, single-axis FBG-based accelerometer and is suitable for a large range of applications. It is a fiber optic version of the well-known conventional accelerometer but completely passive, offering inherent insensitivity to environmentally induced noise.

Features

- **High Sensitivity**
- **Lightweight Non-Metallic Housing**
- **Long-term Reliability**
- **Intrinsically Safe Design**
- **EMI/RFI Immune**

gavea sensors measurement solutions

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Specifications

Optical

Central Wavelength	C-Band (1530 to 1570 nm)
Spectral Width (FWHM)	< 0.6 nm
Reflectivity	> 75%
Insertion Loss	< 0.1 dB
Side Lobe Suppression	> 10 dB
Sensitivity	10 pm/ºC

Mechanical & Environmental

Packaging	Torlon
Dimensions	35.5 mm x 23 mm x 23 mm
weight	25 g
Loose Buffer Tubing	Ø 3 mm; Ø 900 µm
Pigtail Length	1 m (± 10 mm)
Connectors	FC/APC
Operation Temperature	- 20º C to + 80º C
Relative Humidity	< 90% at 40º C (No condensation)
Measuring Range	0 to 40 g (Can be customized)
Frequency Range	0 to 1kHz (Can be customized)
Sensitivity	Equivalent noise 1 mg/√HZ (Depends on measurement unit)
Resonance Frequency	Higher than 1.3 kHz (± 10% of the mean value)
Transverse Sensitivity	< 5% with respect to sensitive axis

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