

FS Series



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FBG Strain Sensors

Optilab's FS Series Strain Sensors are Fiber Bragg Grating (FBG) based sensors, designed to be bonded to surfaces and materials, spot welded to structures and components, attached or directly cast into concrete wet mix. Strain sensors are available in the following configurations: Miniature Polyimide Strain Sensor, Composite Strain Sensor, Weldable Strain Sensor, Surface Strain Sensor, Surface Long Gage, Embedded Strain Sensor, and Embedded Long Gage. Contact Optilab for more information.

Features

- Robust, Reliable, Compatible
- Completely passive
- High multiplexing capability
- Remote sensing
- Self-referenced

Applications

- Strain Measurement
- Civil, industrial, or Aerospace Health Monitoring
- Fiber optic sensors and transducers interrogation
- Laboratory Testing and Measurement
- R&D

FBG Strain Sensors | FS Series

OPTIONS

FS Series

TECHNICAL INFO

For technical info and support:

sales@optilab.com

www.optilab.com

PHONE

Contact Optilab at:

1-888-553-3888 (toll-free)
1-602-343-1496 (direct, int'l)

Optilab, LLC
 Phoenix, AZ, USA

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Optilab Advantage

- Innovation
- Performance
- Quality
- Customization
- Warranty

Sensor Specifications	
Sensitivity	Polyimide 1.2 pm/με Composite 1.2 pm/με Weldable 1.2 pm/με Surface ST 1.5 pm/με Surface LG 1.2 pm/με Embedded ST 1.5 pm/με Embedded LG 1.2 pm/με
Measurement Range	±2500 με
Gauge Length	Polyimide <10 mm Composite 92 mm Weldable 25 mm Surface ST 107 mm Surface LG 1005 mm Embedded ST 104 mm Embedded LG 1002 mm
Resolution	1 με
Optical Specifications	
Central Wavelength	1500 to 1600 nm
Spectral Width (FWHM)	< 0.2 nm
Reflectivity	> 65%
Side Lobe Suppression	> 10 dB
Input/Output Specifications	
Cable Type	Ø 0.9 mm laboratory (hytel) Ø 3 mm indoor (kevlar) Ø 3 mm outdoor (armor)
Cable Length	2 m each side (±5 cm)
Connectors	FC/APC SC/APC NC (No Connectors)
Environmental Specifications	
Operation Temperature	-20 to 80 °C
Protection Class	Surface IP68 Embedded IP68
Mechanical Specifications	
Materials	Polyimide film Composite GFRP and polyurethane Weldable stainless steel Surface stainless steel Embedded stainless steel
Dimensions	Polyimide 40 x 12 x 0.2 mm Composite 130 x 20 x 6 mm Weldable 45 x 15 x 0.3 mm Surface ST 163 x 35 x 20 mm Surface LG 1065 x 35 x 20 mm Embedded ST 140 x Ø 30 mm Embedded LG 1040 x Ø 30 mm