

Grating Sensing Interrogator

ALGSI-S1550

PRINCIPAL ADVANTAGES OF USING FBG SENSORS

- Passive components that can withstand a long life time of up to 20 years.
- It embeds in a fiber optical cable that can transmit a measurement signal over several tens of kilometers.
- No interference with electromagnetic radiation. It can be suitable for applications within high radiation zones where electrical sensors would fail.
- High sensitivity and fast response feedback.
- Flexibility, stability and small.
- It can be deployed in extreme conditions.
- Suitable for both simultaneous static and

OPTICAL INTERROGATOR CAN MEASURE THE FOLLOWING FBG SENSORS:

- Strain
- Displacement
- Temperature
- Pressure
- Load
- Accelerometer

ALGSI-S1550 is a robust & reliable FBG interrogator for FBG sensing system. Based on built-in wavelength analysis module, the equipment can update the data in high accuracy and high frequency. It responds directly to the user commands of the optical interrogator core and outputs sensor wavelength data. It provides a single suite of tools for data acquisition, computation, and analysis of optical sensor networks.

Applications

- **Continuous lifetime health monitoring of bridges, dams, buildings, tunnels, ships, aircraft, trains, and other complex structures.**
- **Measurements of FBG strain gauges, temperature probes, accelerometers, pressure, displacement, and other FBG sensors.**
- **Simultaneous static and dynamic measurements.**



Features

- **Built-in wavelength module**
- **Spectral Diagnostic View for optimizing sensor system setup and operation.**
- **High stability and reliability.**
- **Customized Labview Program.**



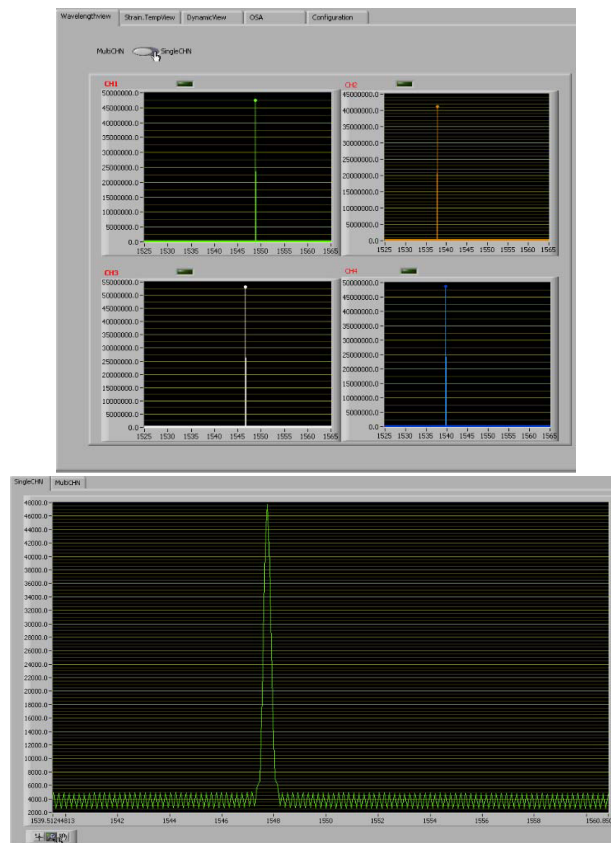
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Specifications

OPTICAL PROPERTIES	
Number of Optical channels	4
Scan Frequency	5000Hz - SINGLE channel 250Hz – FOUR channels simultaneously
Wavelength Range	1525-1565nm
Wavelength Resolution	1 pm
Wavelength Repeatability	+/- 4pm
Minimum number of FBG per channel	18
Optical Connector	FC / APC
DATA PROCESING CAPABILITIES	
Interface	USB 2.0
Source Code	Customized Labview
MECHANICAL, ENVIRONMENTAL, ELECTRICAL PROPERTIES	
Dimension	435 mm (length) x 442 mm (Width) x 42 mm (height)
Net Weight	4.2 kg
Operation Temperature	0° to 50° C
Storage Temperature	-20° to 60° C
Power Supply	DC 6V-9V

Specifications are subject to change without notice



Front Panel and Spectral View of a FBG sensing measurement in a customized Labview program