High Accuracy FBGA Analyzer

WaveCapture® FBGA-IRS Series

Standard

Thin

BaySpec's *WaveCapture*® FBGA Interrogation Analyzer is an integrated spectral engine simultaneously covering multiple wavelengths for precise and Rapid Fiber Bragg Grating (FBG) sensor system measurements.

The device covers wide wavelength ranges and provides simultaneous measurements at very fast response rates and excellent wavelength resolution. High reliability (MIL STD 810F shock and vibration) is achieved through a rugged mechanical design with no moving parts. Periodic calibration is not required. High speed Input/output (I/O) is achieved through the use of USB2.0 communications (serial communications also supported at lower speeds).

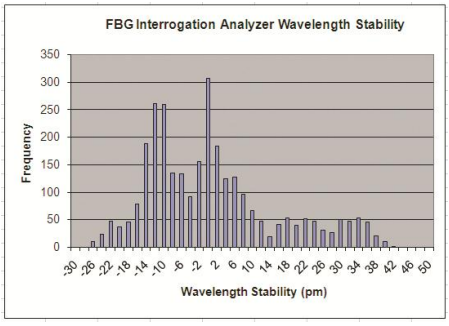
The *WaveCapture*® FBGA Series employs a highly efficient Volume Phase Grating (VPG®) as the spectral dispersion element and an ultra-sensitive InGaAs array detector as the detection element, thereby providing high-speed parallel processing and continuous spectrum measurements. As an input, the device uses a tapped signal from the main data transmission link through a single mode fiber, then collimating it with a micro lens. The signal is spectrally dispersed with the VPG®, and the diffracted field is focused onto an InGaAs array detector. The control electronics read out the processed digital signal to extract required information. Both the raw data and the processed data are available to the host.

Key Features

- Fixable wavelength range
- Ultra-fast response time (up to 5kHz)
- Excellent wavelength repeatability and resolution
- Athermal design enabling battery-operated portable operation
- High reliability for use in harsh environment
- Compact, card-mountable design

Consider Using With:

- Mini-Wide Light Sources
- ASE Light Sources
- Fiber-optical Bundles & Accessories

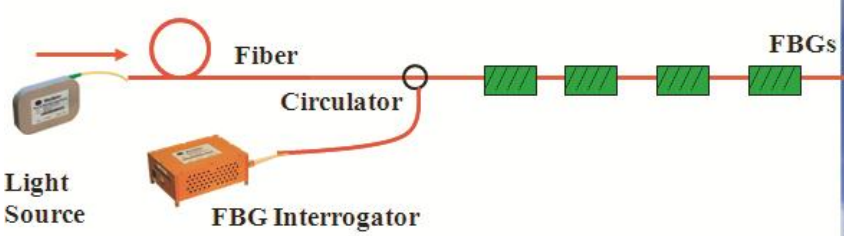


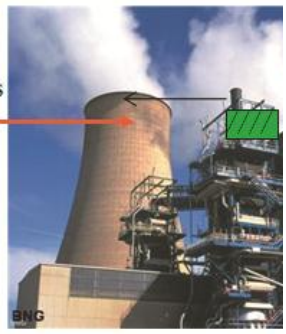
Applications:

- Real time fault detection and isolation in fiber optic sensing systems
- OEM module for handheld field test equipment
- Harsh environments

Compliance:

- Telcordia GR-63/1209/ 1221-CORE qualified
- MIL STD 810F





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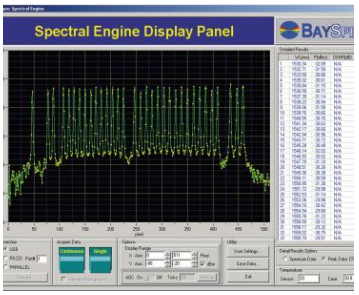
WaveCapture® FBGA-IRS Series

Specifications	Data	Unit
Standard Wavelength Ranges*	Standard: 1525-1565 Extended: 1510-1590	nm
Wavelength Repeatibility	± 2	pm
Wavelength Readout Resolution	1	pm
Minimum Detectable Wavelength Change	± 1	pm
Frequency response time (typ.)	Standard: ~5 Hz (RS232/USB1.1) Fast: ~5 kHz (USB2.0)	
IRS - Internal Reference Source	Integrated	Yes
Channel Input Power Range	-60 to –20 or specify	dBm
Power Resolution	0.1	dB
Size	Standard: 113.5 x 84 x 47.5 Thin: 148 x 142 x 29.1	mm^3
Interface	RS232 or USB (Fast board USB only)	
Operating Temperature	-5 to +70	°C
Software	BaySpec's *Sense 2020* evaluation software included, SDK for development	

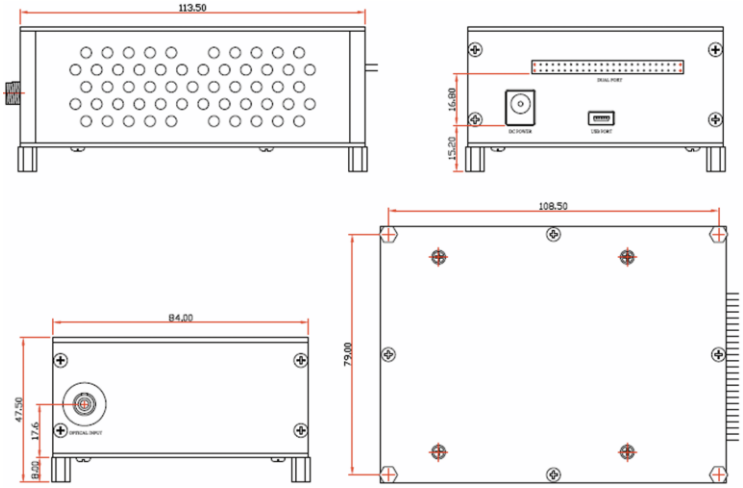
* Other wavelengths available upon request

Sense 2020 Software



BaySpec's *Sense 2020* software included, a Windows-based package with flexible data acquisition, processing and output functionality

BaySpec SDK, a software development kit for new applications development and integration into to your host software systems.



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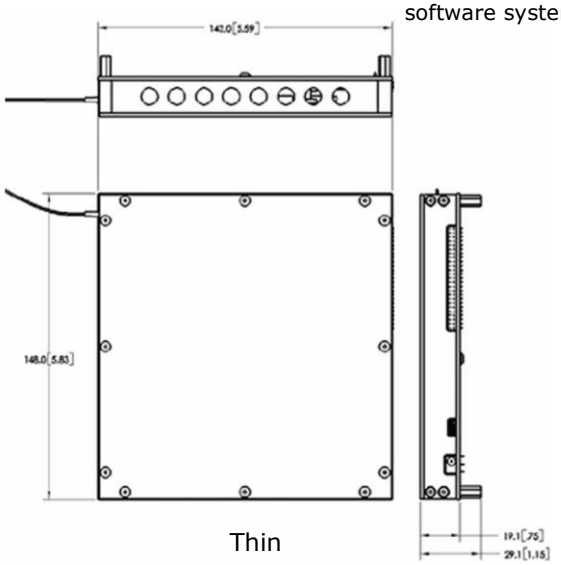

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Order Info for Part Number:

FBGA-IRS- ☐ - ☐☐☐☐ - ☐☐☐☐ - ☐☐

Frequency Response	Starting Wavelength	Ending Wavelength	Code	Connector Type
Specify response time: S Standard (~5Hz) F Fast (~5kHz) E Ethernet (~5kHz)	Specify the starting wavelength i.e. : 1280 1280.00nm 1525 1525.00nm 1510 1510.00nm Or specify	Specify the ending wavelength i.e. : 1320 1320.00nm 1565 1565.00nm 1590 1590.00nm Or specify	NC FA FP SA SP LA LP XY	No connector FC/APC FC/PC SC/APC SC/PC LC/APC LC/PC TBD

Note: standard length 1.0m

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