



Portable System

Applications:

- Smart structures
- Strain measurements
- Perimeter sensing
- Aerospace vehicles
- Construction
- Oil & Gas down-hole drilling
- Electrical grid reliability
- Mining
- Medical devices
- Transportation
- Energy (Solar, Nuclear, Wind)

Compliance:

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

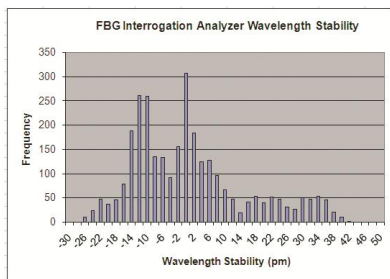
BaySpec's WaveCapture® FBGA System is an interrogation system with an integrated light source that monitoring multiple wavelengths distributed over 4 channels. Precise fiber bragg grating (FBG) sensor system measurements are achieved with high end of life (EOL) wavelength accuracy at high frequency response time.

The device covers wide wavelength range 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 or Ethernet (serial communications also supported at lower speeds).

The WaveCapture® FBGA System's core spectral engine 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. The signal is spectrally dispersed with the VPG®, and the diffracted field is focused onto an InGaAs array detector.

Key Features:

- High reliability, no moving parts
- Ultra-fast response time (up to 5 kHz)
- Excellent wavelength repeatability and resolution
- Low power consumption design enabling battery-operated operation
- High reliability for use in harsh environment
- Integrated broadband light source
- Up to 4 channels
- USB, Ethernet or RS232 interface

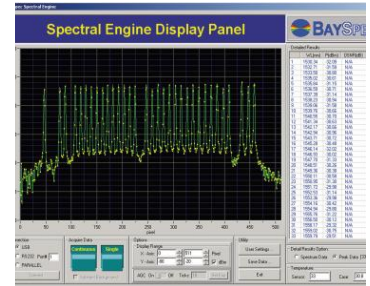


Over 30,000 spectral engines of all types in the field. Contact BaySpec to discuss your OEM requirements.

Specifications	Data
Channel Number	1 or 4 (with 1x4 Optical Switch)
Wavelength Range*	Standard: 1525-1565nm Extended: 1510-1590nm (*Other wavelength ranges upon request)
Internal Wavelength Reference (IRS)	Optional
Wavelength Repeatability	± 2pm (with IRS); ± 5pm (without IRS)
Wavelength Readout Resolution	1pm
Minimum Detectable Wavelength Change	± 1pm
Optical Interface	FC/APC connector (or Customer Specify)
Frequency Response Time	Standard: 1 to 5 Hz (RS232/USB1.1) Fast: up to 5 kHz (USB2.0 or Ethernet)
SLED Light Source	> 15mW Output Power >40nm FWHM for Standard >80nm FWHM for Extended
Optical Circulator	Included
Operating Temperature Range	-10 to 55°C; 0 to 80%, non-condensing
Storage Temperature Range	-20 to 70°C; 0 to 95%, non-condensing
Software	BaySpec's Sense 2020 software included SDK for development
Power Supply	110 to 220V AC
Power Consumption	< 10W

* 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.

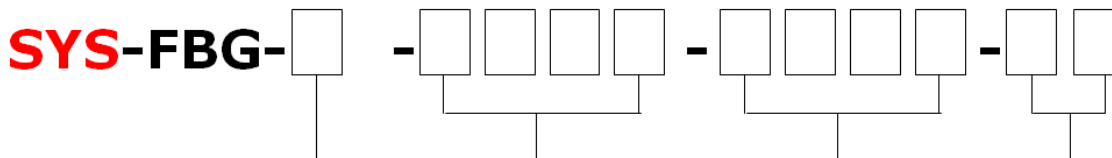


Front Panel



Back Panel

Order Info for Part Number:



Frequency Response
Specify response time:
S Standard (~50Hz)
F Fast (~5kHz)
E Ethernet (~5kHz)

Starting Wavelength
Specify the starting wavelength i.e. :
1280 1280nm
1525 1525nm
1510 1510nm

Ending Wavelength
Specify the ending wavelength i.e. :
1320 1320nm
1565 1565nm
1590 1590nm

Ch	# of Channels
01	1 Channel
04	4 Channels
08	8 Channels
16	16 Channels
32	32 Channels

Or specify

Or specify

