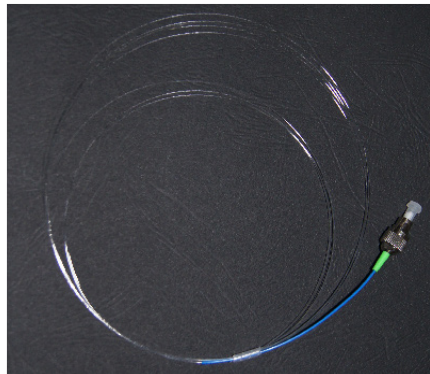


FBG-3



Triple Fiber Bragg Grating (FBG-3) ASSEMBLY

The Optilab FBG-3 is a triple Fiber Bragg Grating (FBG) device on a single strand of fiber, for use with fiber sensing applications for structural health or temperature monitoring. With three individual FBGs on a single fiber pathway, it can be utilized as either a triple FBG monitoring system (with different center wavelengths on grating), or as a temperature calibration compensator, with all three FBGs using the same center wavelength. This unique design allows for a high degree of accuracy and increased temperature sensitivity, with precision measurements in a wide range of environments. In addition to its standard high tensile strength, the FBG-3 can be ordered in either standard Acrylate fiber type, or in Polyimide recoating for high temperature situations, up to 300° C.

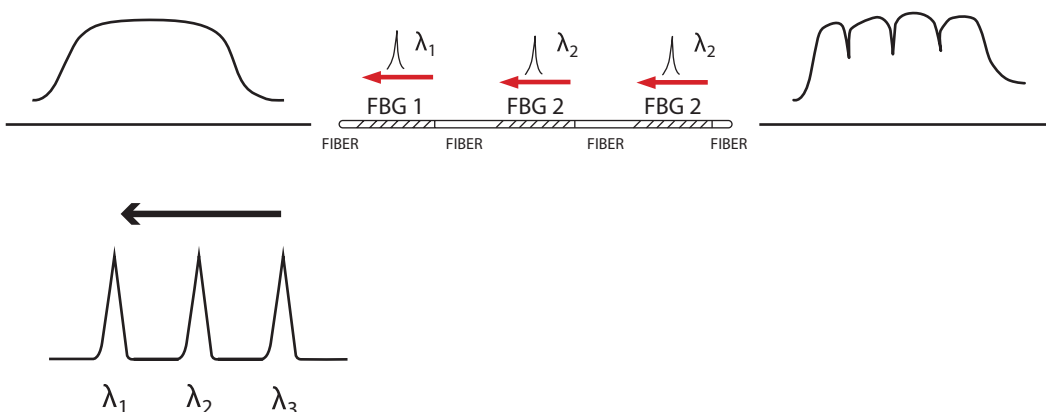
Features

- Precise Controlled Distance between three FBGS
- High Reliability and Stability
- High Side-lobe Suppression Ratio
- Apodized FBG Design
- Fully Qualified w/ Test Data

Applications

- Temperature Compensated Sensor
- Triple Sensor
- Other Specialty Sensors

Functional Diagram



Triple Fiber Bragg Grating (FBG) ASSEMBLY

OPTIONS

- FBG-3-x
 X S: Standard
 P: High strength Polyimide

TECHNICAL INFO

For technical info and support:

sales@optilab.com

www.optilab.com

WEB ORDER

To order, please visit OEQuest.com.



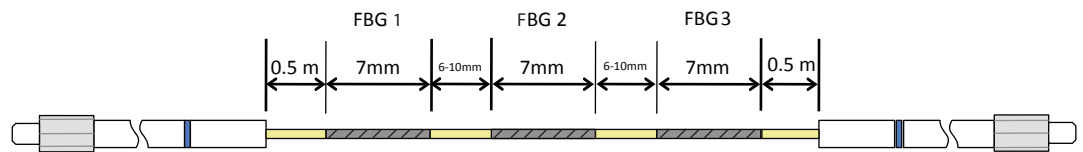
Product Type	FBG-3-S (Standard)	FBG-3-P (Polyimide)
FBG Construction	Apodized, other types available	
Central Wavelength	1510nm - 1600nm	1510nm - 1600nm
Wavelength Accuracy	±0.2nm	±0.2nm
3dB Bandwidth	<0.25nm	<0.25nm
Reflectivity	>90%	>90%
Insertion Loss	<0.2dB	<0.2dB
SMSR	≥10dB	≥10dB
Mechanical Specifications		
FBG Length	7mm	7mm
FBG Length Accuracy	±0.5mm	±0.5mm
Distance between Grating	13.9mm	13.9mm
Distance Accuracy	±1mm	±1mm
Pigtail Length	1m	1m
Operation Temperature	-40°C to 120°C	-40°C to 120°C
Storage Temperature	-40°C to 150°C	-40°C to 150°C
Fiber Termination	Bare Fiber FC/APC	Bare Fiber FC/APC
Fiber Coating	Acrylate	Polyimide
Proof Test	>100kpsi	>150kpsi
Fiber Type	SMF-28e	SMF-28e Polyimide

Optilab Advantage

- Innovation
- Performance
- Quality
- Customization
- Warranty

* Blue font is customizable parameters

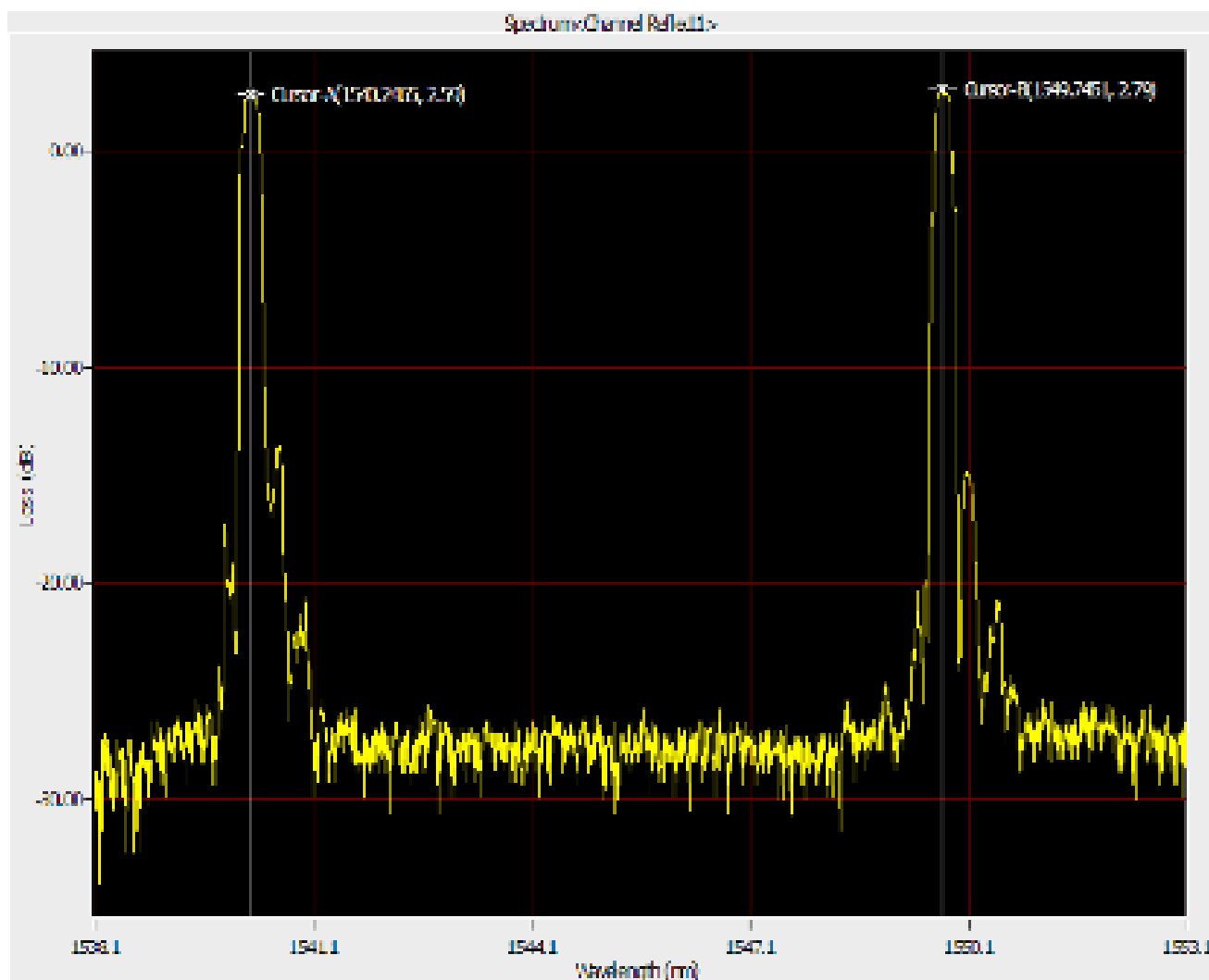
Mechanical Drawing



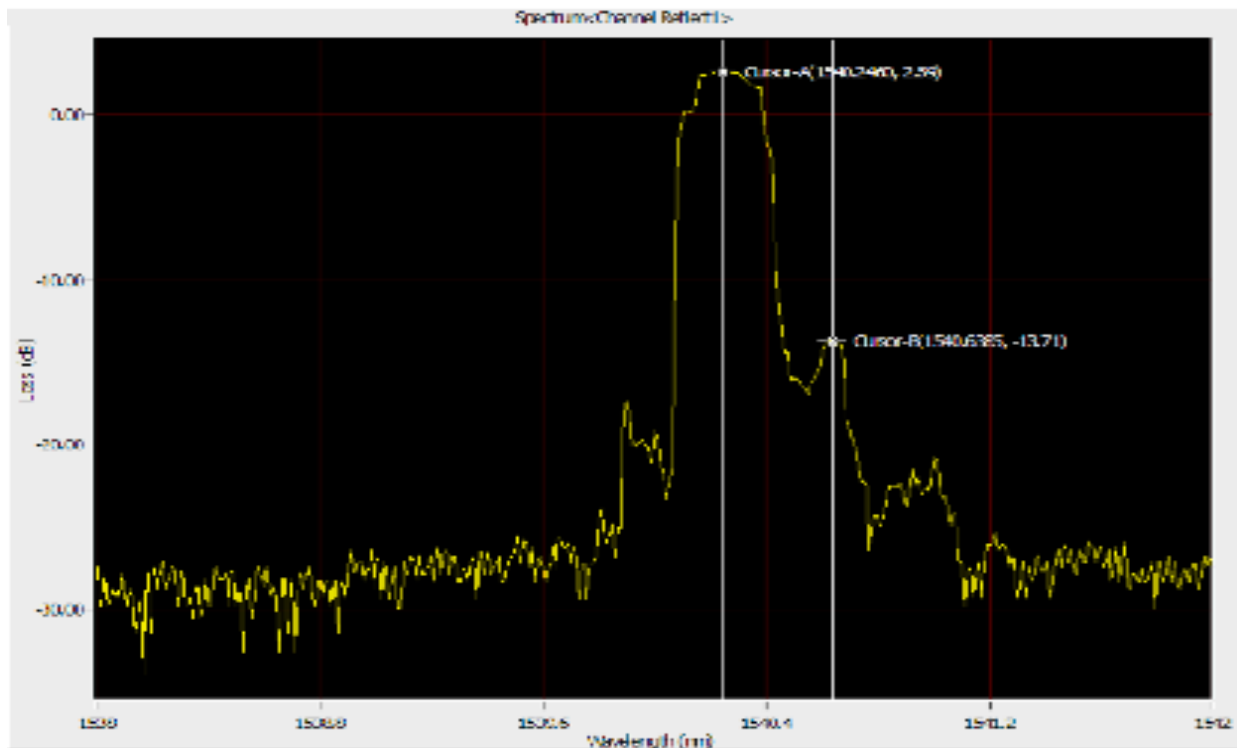
FBG-3 Sample Test Report

PN:	FBG-3
Jacket Type:	Polymide
Pigtail 1:	0.5mm
FBG Length 1:	13.2mm
Center Wavelength 1:	1540.246nm
SMSR 1:	16.3dBm
Fiber Type 1:	SMF-28e
3dB Bandwidth 1:	0.294nm
Reflectivity 1:	94.16%

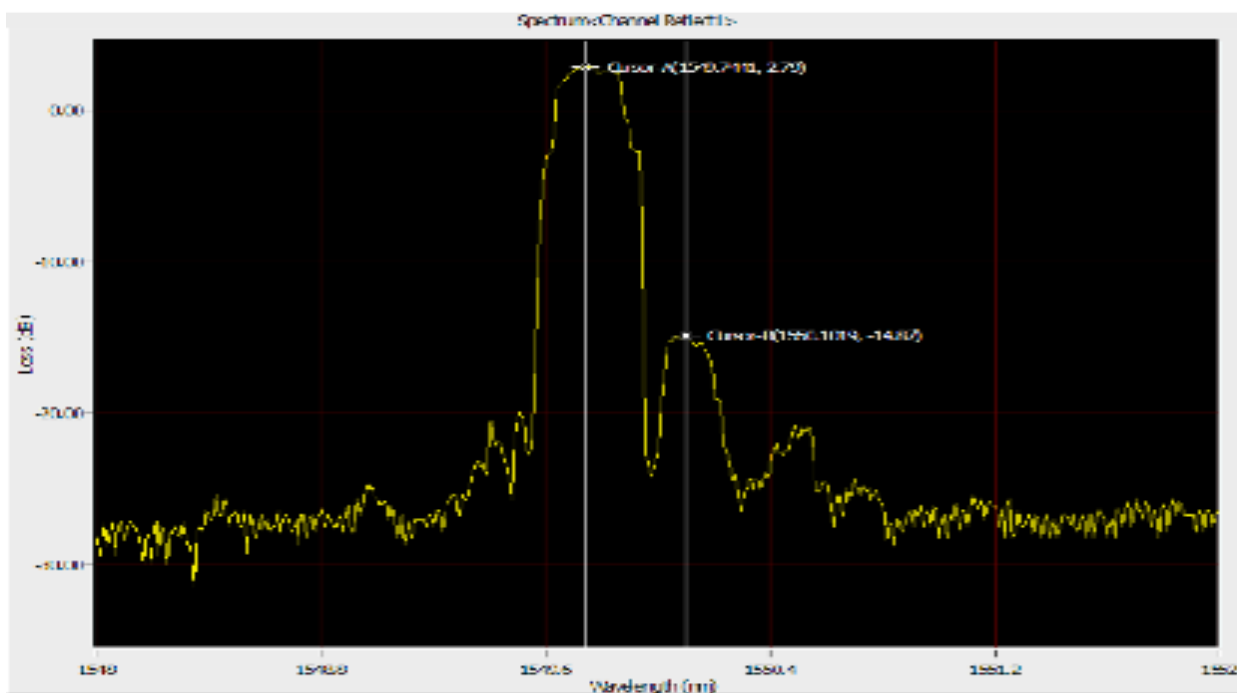
S/N:	E140718-538
Connection Type:	FC/APC
Pigtail 2:	1.5mm
FBG Length 2:	12.8mm
Center Wavelength 2:	1549.745nm
SMSR 2:	17.66dBm
Fiber Type 2:	SMF-28e
3dB Bandwidth 2:	0.246nm
Reflectivity 2:	90.72%



FBG-3 Sample Test Report



Mark-A (1540.0460nm, 2.59dB)
Mark-B (1540.6385nm, -13.71dB)
Center Wavelength: 1540.046nm



Mark-A (1549.7441nm, 2.79dB)
Mark-B (1550.1019nm, -14.87dB)
Center Wavelength: 1549.745nm