Welltech Instrument Company Ltd

FRP - FBG

Fiber Reinforced Polymer FBG (FRP FBG)

When monitoring sensing points for high strain, distributed FBG cable will be ideal solution for any application. The fbg array is embedded in a glass fiber reinforced plastic (GFRP) that permits fbg to expand and compress freely with strain variation. This packaging protects fiber and makes the sensor robust and easy to handle and install.

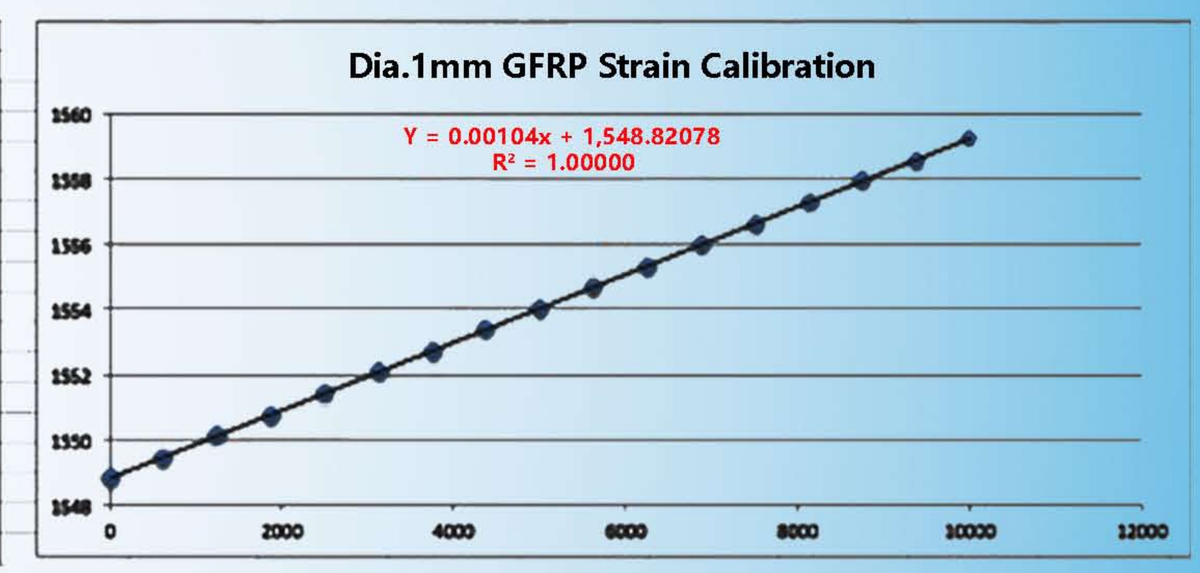
- Glass FRP

FRP-FBG Strain Sensor

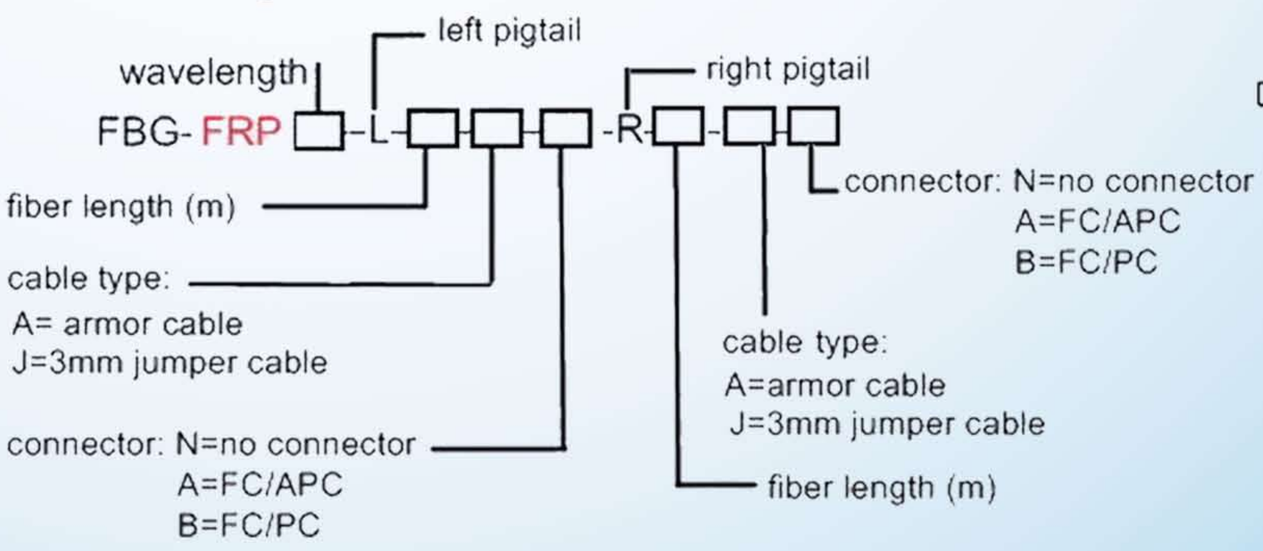
- Wavelength: any wavelength between 1510 to 1590nm
- Diameter: 1mm, 1.5mm or 2mm
- Length: any lenght up to max 30m
- Maximum of FBG: Max 30 on one GFRP rod
- Strain Range: +/-10000ue
- Maximum longitudinal load: 500N
- Accuracy: <0.1% (about 2-3με)
- Resolution: 1ue
- Repeatability: <0.5%
- Linearity: <0.5%
- Reflectivity:> 90%
- Side Lobe Isolation: >15dB
- Material: Glass Reinforced Polymer
- Type: Embedded Type

Multi-FBG on FRP

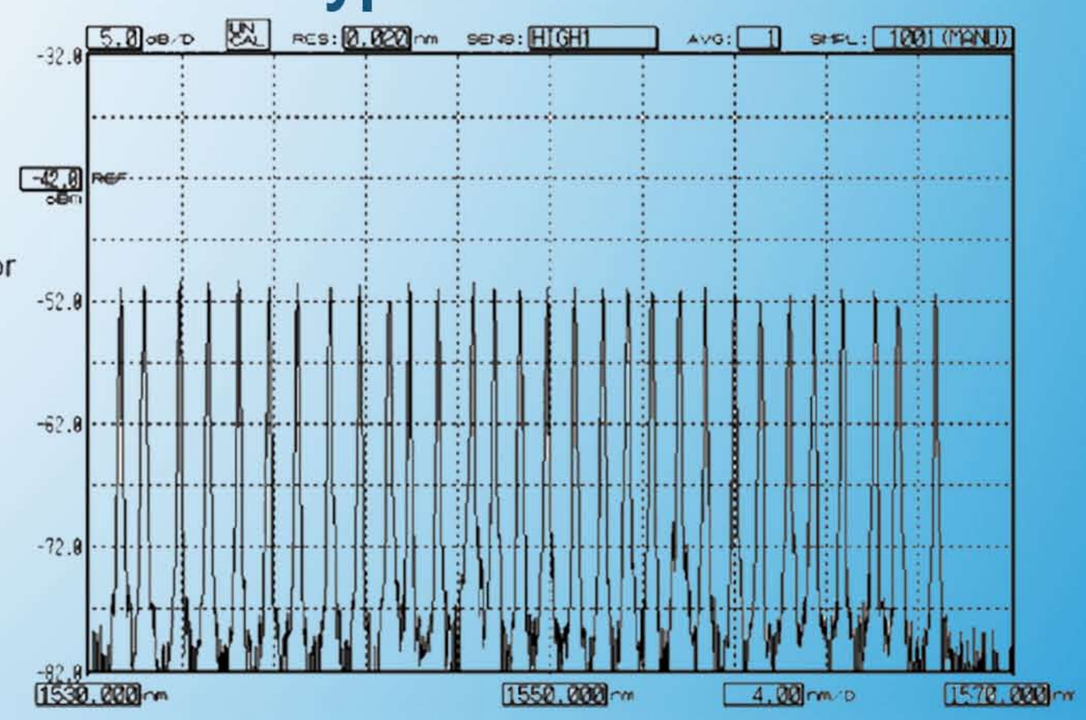
Strain (με)	Wavelength(nm)
0	1548.826
625	1549.475
1250	1550.117
1875	1550.766
2500	1551.423
3125	1552.074
3750	1552.727
4375	1553.372
5000	1554.025
5625	1554.672
6250	1555.321
6875	1555.971
7500	1556.622
8125	1557.271
8750	1557.919
9375	1558.571
10000	1559.244



Ordering Code



Typical Calibration Curve



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