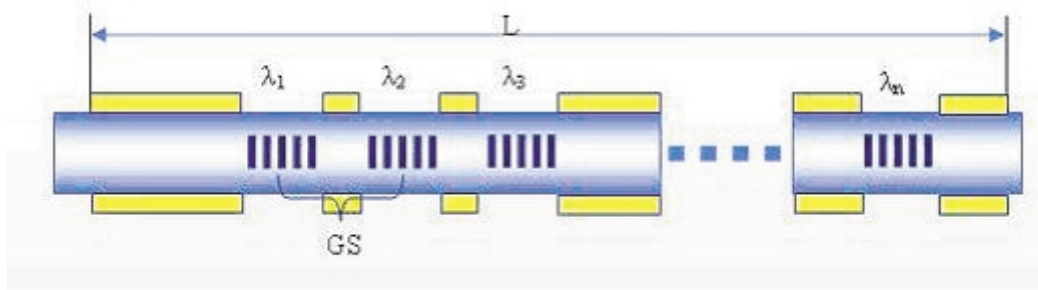


FBG Arrays

Alxenses's FBG array is produced using advanced fabrication technique to write many FBGs in a single strand of optical fiber without any splicing points. The mechanical strength of Alxenses's FBG arrays is therefore significantly better than FBG arrays produced by slicing many FBGs together. The high quality FBG array with customized wavelength and spacing allow distributed measurement over long distance. FBG arrays are particular suitable for large-scale sensing in strain, temperature or pressure monitoring in oil, gas, civil engineering, aviation and marine industries.



Features

- Low Insertion Loss
- Spliceless FBG array
- Customized FBG array configuration
- Accurate FBG wavelength and reflectivity

Applications

- Large-scale strain and temperature monitoring in oil, gas, civil engineering, aviation and marine industries.

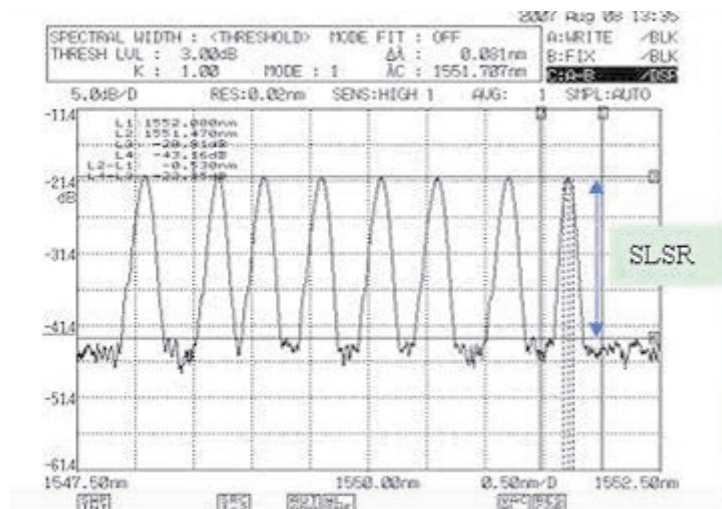
Notes

- Please specify the fiber type. (SMF28/HI1060/PM)
- Please specify polyimide or acrylate coating.
- Please specify the number and wavelength of FBGs in the array.

SPECIFICATIONS

FBG Arrays

Parameter	Values				Units
Wavelength Range	1510~1590				nm
Wavelength Tolerance	+/-0.5				nm
FBG Length	3	5	10	15	mm
Reflectivity	>70	>75	>90	>90	%
Bandwidth at 3dB	<0.7	<0.7	<0.3	<0.3	nm
Side Lobe Suppress Ratio (SLSR)	>15				dB
Mini. Spacing	10				mm
Spacing Accuracy	<5				mm
Recoating	Acrylate / Polyimide				--
Proof Test	>100				Kpsi
Fiber Type	SMF-28e or Polyimide fiber				--
Fiber Termination	Bare Fiber, FC/UPC, FC/APC or E2000				--
Pigtail length from FBG	1m / Customized length				m
Operating Temperature	-5 ~ +80				°C
Storage Temperature	-40 ~ +85				°C



SLSR: Side Lobe Suppress Ratio
 λ_c Centre wavelength
-3dB Width Full Width Half Max FBG Bandwidth
GS Grating Space
L Fiber length

All of these parameters can be designed to satisfy customers' needs.

FBG Arrays Enquiry Form

Parameter	Units	Customized Specification	Remarks
Number of FBGs in an array	--		Max. no. is limited to 100m of fiber with no splicing
FBGs' Wavelength	nm		Wavelength range from 1510nm to 1590nm Please specify in order of locations starting from the input end.
FBGs' position along fiber	mm		Min. spacing between FBGs is 10mm The 0-mm position is the input end of the fiber or connector Position accuracy is +/-2mm
Physical Length of FBG	mm		Typ. reflectivity and bandwidth for different lengths of FBG
Reflectivity	%		3-mm: >70%, <0.7nm 5-mm: >70%, <0.5nm
Bandwidth at 3dB	nm		10-mm: >90%, <0.3nm 15-mm: >90%. <0.2nm
SLSR - Side lobe suppression	dB		Typ. >15dB
Fiber Type S: SMF28 or compatible fiber H: HI1060 P: PM	--		SMF-28 or compatible fiber
Recoating materials A: Acrylate P: Polyimide	--		
Connector type: N: No connector F: FC/PC A: FC/APC	--		If need connectors at both ends, please specify. Example, F-A means with FC/PC connector at position 0-mm and FC/APC connector at the other end.
Proof Test	Kpsi		