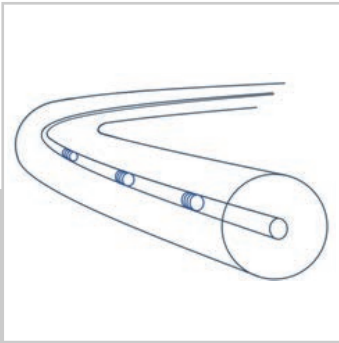




COMPONENTS

DRAW TOWER BRAGG GRATINGS



These fibre Bragg Gratings Arrays are perfectly suited to be used as thermal or strain sensors. The process to inscribe them directly during the fibre draw allows to preserve the pristine mechanical strength of the fibre as for a telecom grade one. An unlimited number of gratings can be inscribed in a repeatable way on standard or spun fibres. Reduced clad fibres, associated Fan in/Fan out and connectorisation available on request.

MAIN CHARACTERISTICS

- Weak reflectivity
- Strong mechanical strength
- Customizable FBG length and spacing
- Customizable Sensor length

APPLICATIONS

- Temperature and strain sensor
- Shape sensing
- Structural Health Monitoring

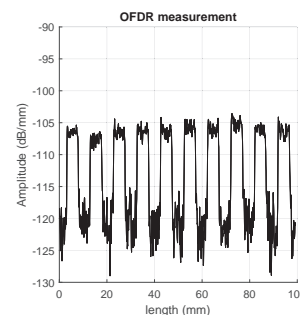
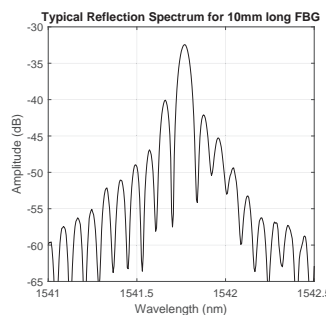
Product line **PERFAS**

SPECIFICATIONS	FBGA1-LL-SSS*	FBGA2-LL-SSS*	FBGA7-LL-SSS*	FBGA7s-LL-SSS*
Optical parameters	Single Core Fibre	Dual-core fibre	Seven- Core Fibre	Seven- Core Fibre
Spin Version	None	None	None	Spun
Reflectivity (%)			0.1 < R < 5	
Full-Width-at-Half-Magnitude (pm)			60 < FWHM < 700	
Center Wavelength (nm)			1540 +/- 2	
Side Lobe Suppression Ratio (dB)			≥ 7	
FBG Length (mm)			1 to 10	
FBG Spacing (µm)			≥ 50	
Mode Field Diameter @ 1550nm (µm)			5.6 +/- 0.5	
Numerical Aperture			0.23 +/- 0.02	
Physical/Material parameters				
Core Diameter (µm)			5 +/- 1	
Cladding Diameter (µm)			125 +/- 2	
Coating Type			One-layer Acrylate	
Coating Outside Diameter (µm)			> 155	
Spinning Rate (twist/m)	-	-	-	≥ 20
Proof-Testing (kpsi)			≥ 50	
Operational T° Range (°C)			- 20 to + 80	

* FBGAx - LLb - SSSc with (a) cores number (adding 's' if Spin version) (b) FBG length (in mm), (c) FBG spacing (in mm)

Typical reflection spectrum

Typical reflection spectrum for a 10mm long FBG and OFDR trace for a 1-meter long FBGA made of 5mm long FBG spaced of 5mm.



Multiple options and configurations are available. Please contact Photonics Bretagne to find the best fit.
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