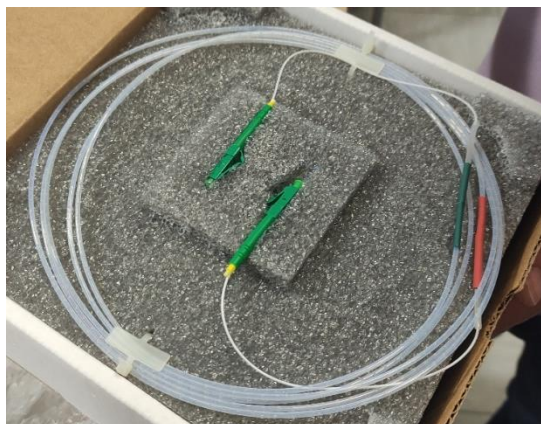


DESCRIPTION

CALSENS offers single mode fiber (SMF) Fiber Bragg Grating (FBG) sensors prepared to measure and operate in cryogenic environments. CALSENS offers a unique FBG sensors capable to operate with high sensibility in cryogenic and very low temperature environments for long periods of time. We can help with the design and configuration to assist different of applications.

Manufactured using proprietary know-how, the sensors provide excellent wavelength accuracy and stability for its use with any interrogator in the market.

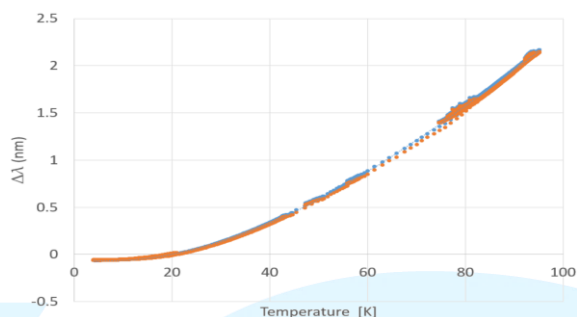


KEY FEATURES

- Capable to operate both in normal conditions and in temperatures below 30°K
- Available as a single sensor or in a configurable array
- Long-life reliable wavelength response
- Custom design of wavelength and response for the FBG

APPLICATIONS

- Industrial & Chemical process monitorization
- Cryogenic applications
- Gas transport and storage
- Hostile environment measurements



Optical Parameters

Wavelength	1460-1620 (others available on demand)	nm
Fabrication Tolerance	+/- 0.5	nm
Reflection bandwidth (FWHM)	0.1 – 2.0	nm
Reflectivity	>40 (custom values available)	%
SLSR	>10 (other values available)	dB

Physical Parameters

FBG Length	5-10 (custom values available)	mm
Minimum Temperature (linear response)	20*	°K
Fiber Pigtail Length	1 (other values available)	m
Fiber Type	SMF G.652 (custom options available)	
Optical Connector	FC/APC (custom options)	
Fiber protection options	Naked Fiber, polyimide, Steel, Ceramic (custom options)	

*20°K Temperature only available for some fiber protection options
Single sensor and array configurations (with custom number of FBG and separation) available