HT-Flex500

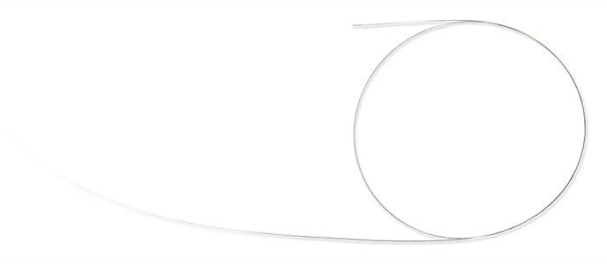
Flexible High Temperature FBG Sensor

Description:

HT-Flex500 is a Fiber Bragg Grating (FBG) based temperature sensor for harsh environments. The sensor typically consists in a cascade of FBGs, packaged in metallic capillary tube (ϕ = 1.2 mm typical outer diameter, others on request) and its flexibility enables both surface and embedded installations. The loose tube construction and the FBG sensors within the optical fiber allow an operating temperature range up to 500 °C (600 °C R&D).

Typical applications:

- **Machine Condition Monitoring**
- **Power Plants Transformers**
- **Chemical Processes**
- **Escalators**
- **Conveyor Systems**
- **High Temperature Environments**



Physical specifications:

Probe Construction	Capillary Loose Tube
Dimension (ϕ x L)	1.2 mm (Sensor Length to suit application)
Flexibility	Down to 300 mm diameter (depending on probe diameter)
Package material	Stainless steel AISI 304 or other options

Optical specifications:

Fiber Type	Single-mode SMF-28 9/125 µm
FBG Wavelength (CWL)	1460 ÷ 1620 nm
FBG Bandwidth (FWHM)	> 0.1 nm
FBG Reflectivity Peak (R)	Typical 50 % (other on request)
Side Lobe Suppression Ratio (SLSR)	> 15dB
Sensors Spacing (D)	> 7 mm (Customizable)
Sensors Number	Custom to suit application
Measurement Range	-50 to 500 °C (600 °C R&D)
Sensor Resolution	0.1 °C*
Sensor Accuracy	0.5 °C*
Cable and Connector	to suit application (armored flexible stainless-steel and polymeric tubing pigtails available)

* Depending on the FBG sensors reading unit and calibration equipment

Note: All the above specifications may be changed without notice

Rev. 20201001