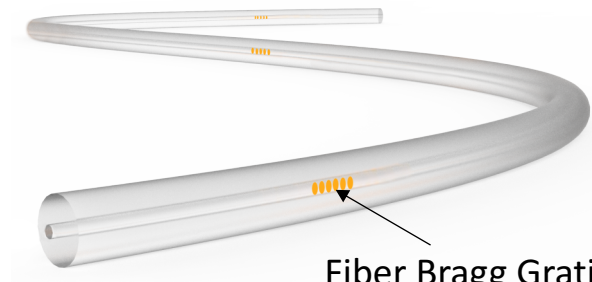


Features

- This technology enables multiplexing capability. In fact, several gratings can be written on a single optical fiber.
- Multiple parameters can be measured at same time such as temperature, strain, vibration etc.
- Single and multi-point sensing.
- Small and lightweight.
- High sensitivity and long-term reliability.
- Intrinsically safe operation.
- Ability to be used in harsh environment.
- Immunity to electromagnetic and RF interference.

BraggSenz

Fiber Bragg Grating System



Fiber Bragg Grating

Introduction

Fiber Bragg Grating (FBG) works as distributed Bragg reflector (DBR) build on an optical fiber with the help of periodic variation in refractive index of the single mode fiber core. When light is passed through the FBG it will reflect certain wavelength of light and transmits all other. When temperature or strain around Grating changes, shift in reflected wavelength is observed.



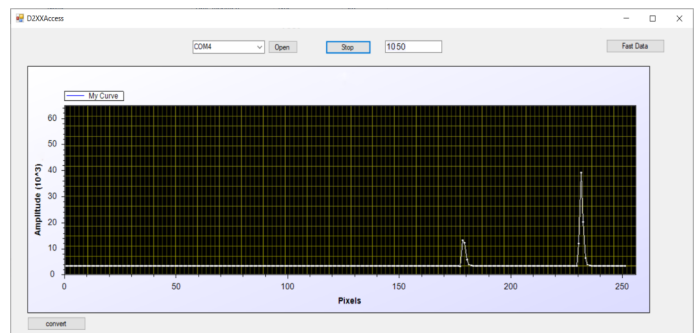
FBG System Block Diagram

Specifications

Sensor Cable	Remark
Temperature measuring range	-20°C - 250°C -20°C - 450°C -20°C - 650°C
No. of channels	4 (Max.)
No. of FBGs per channel	1 (Min.), 20 (Max.)
Length of grating	10-15 mm
Sensor cable length	Upto 500 m
Fiber type	SMF 28 e
Fiber connector	FC/APC
Monitoring System	Remark
Interrogator size : (LxWxH)	260x160x92 mm
Operating temperature	0 to 50°C (Electronics)
Storage temperature	-20 to 70°C
Power supply	100-230 V AC, 50-60 Hz
Communication interface	USB 2.0, RJ45, RS485

Software

The BRAGGVIS temperature monitoring software can be used to control the braggSEnz system and visualize temperature/strain data on a PC. The BRAGGVIS software can be used to amend the configuration and monitor the braggSEnz as well as display data graphs. BRAGGVIS performs monitoring, operation and control from anywhere over an Ethernet network.



Application

- Hydro power plant monitoring
- Petrol and gas exploration
- Structural health monitoring
- Aerospace industries
- Tunnels and pipelines monitoring
- Commercial transportation
- Medical industry.



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