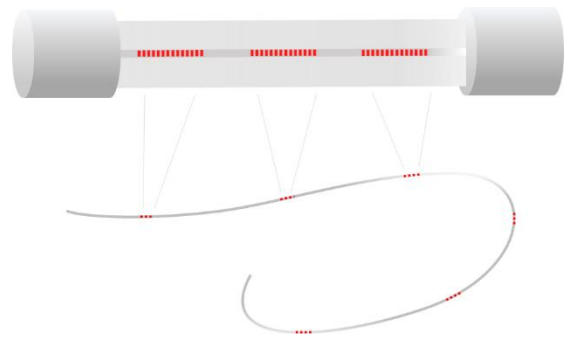


Description:

INFIBRA TECHNOLOGIES offers arrays of Fiber Bragg Gratings (FBGs) with a wide range of optical specifications and material options to meet all customer requirements. It is possible to write dozens of FBG in a single optical fiber. Thanks to the Wavelength Division Multiplexing (WDM) configuration, it is possible to monitor each FBG in the array simultaneously. The excellent linearity of the FBGs to strain and temperature and their small dimension makes FBG arrays suitable for quasi-distributed stable and high accurate long-term sensing applications, also in harsh environments, with high temperature, ATEX and EMI requirements.

Typical applications:

- **Civil** (buildings, bridges, dams, tunnels)
- **Transportation** (trains, railways, marine, highways)
- **Power** (wind and steam turbines, power plants)
- **Oil & Gas** (gas turbine, pipelines, LNG)
- **Automotive and Aerospace** (vehicles, planes)
- **Medical and Robotics** (probes, endoscopy)
- **Telecommunications**
- **Reserch & Development**



FBG specifications:

Number of FBGs per array	Up to 50 (higher on request)
FBG Wavelength (CWL)	1500 ÷ 1600 nm (other on request)
FBG Wavelength tolerance (CWLT)	± 0,5 nm (other on request)
FBG Bandwidth (FWHM)	0,1 nm to 1 nm (other on request)
FBG Reflectivity Peak (R)	Up to 99 % (50 % typical)
Side Lobe Suppression Ratio (SLSR)	> 15dB (other on request)
FBG Length (L)	1 mm ÷ 12 mm (other on request)
FBGs Spacing	> 15 mm (other on request)
Fiber Type	Single-mode SMF-28 SM Band insensitive fiber SM Pure silica core fiber (other fibers on request)
Fiber coating	Acrylate (up to 80°C) High Temperature Acrylate (up to 150°C) Polyimide (up to 250°C, short term 400°C) Metal coating on request (up to 700°C)
Fiber pigtail length	1 m both side (other on request)
Optical connector	FC/APC (other on request)
Packaging options	Tubing (e.g. polymeric, stainless steel, PEEK, PTFE) Extra buffer ruggedization (other on request)

Note: All the above specifications may be changed without notice



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