QPS Photronics Inc.

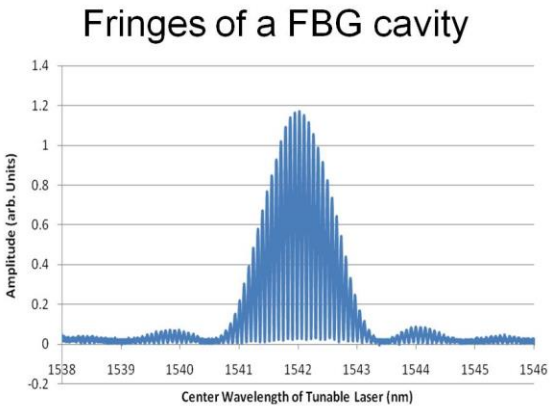
Advanced FBG
Fabry Perot FBG Cavity
and its system integration

Key features

- 10 x better performance than regular FBG
- Convert wavelength change directly to voltages in both high and low frequency applications
- FBG pair with matching wavelength
- Low and High Finesse cavity

Applications

- End winding Vibration
- Vibration signature capture in high voltage and strong electromagnetic field environment
- Vibration Monitor of large motor and diagnosis



Specifications

Specification	Min	Max	Typical
Center wavelength in nm	1530	1565	Within C band
Wavelength Tolerance in nm	+/-0.1	± 0.2	
Wavelength matching in nm		± 0.01	
• Cavity length in mm (measured from center to center)	5	20	10
*** Grating length in µm**	300	900	custom
Fringe width	Depends on cavity length		

Performance & Limitations

- Low frequency
  - Vibration 30Hz to 2KHz
- High frequency
  - Acoustic Emission 30 to 300 KHz
  - Signal to noise

Supporting interrogation method

- QPS VibroFiber Technology available for license plus special packaging
- Pico scope with special QPS packaging, receiver module
- 20 db with low and high frequency

* Cavity length is also dependent on grating length, total length is 25 mm.

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