FIBER BRAGG GRATING

IXC-FBG-PS-CW-4-ATH-PM-CC

Ultra-Narrow Band-Pass Filter

This filter type is based on a specific process using a phase-shifted (PS) technique. This phase-shifted is introduced to the refractive index modulation, leading to a narrow transmission peak within the stopband. In this case, the Full Width Half Maximum (FWHM) is tailored in order to obtain a 4 GHz flat-top pass-band filter.

Filter shape exhibit a flat-top shape in order to preserve signal integrity and steep edges to remove all unwanted signals and noises.

Thermally packaged, this filter is very stable against temperature variations.

Additionally, the band-pass wavelength can be easily and finely adjusted by rotating a tiny screw on the package.

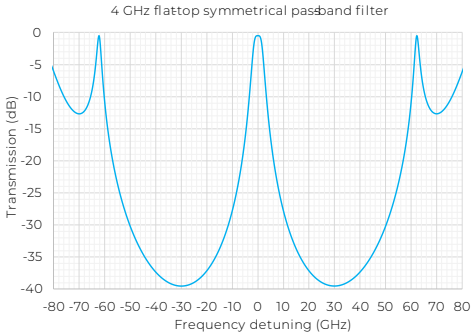
Benefits & Features

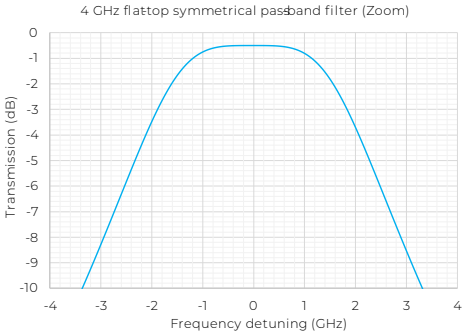
- Flat-top symmetrical pass-band filter
- 4 GHz FWHM range
- PM or SMF
- Filtering over the full C or L band
- Low insertion loss
- High temperature stability within a 1 pm/°C
- ± 100 pm fine tuning with our specific athermal package

Applications

- Microwave photonics
- Quantum communication
- Space communication
- Lidar
- Lines filtering for lasers and sensors
- RF filtering
- ASE or laser mode suppression
- Linewidth reduction
- Frequency discriminator

Typical spectrum (measured in transmission)





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IXC-FBG-PS-CW-4-ATH-FT-CC
Ultra-Narrow Bandwidth Band-Pass Filter
TECHNICAL SPECIFICATIONS

Parameters

Band-pass center wavelength CW (nm) [1]	1525 .... 1610 (TBD)
Band-pass bandwidth (FWHM) (GHz)	4 ± 0.5 (28 - 36 pm)
Rejection bandwidth ΔV (GHz)	> 125
Insertion loss IL (dB)	< 1
Out-of-band attenuation ΔT at ± 10 GHz (dB)	> 25
Tuning range (pm)	± 100
Tuning resolution (GHz)	1
CW thermal drift [- 5 ; 70]°C (pm)	< 150
Packaging (mm)	55 x 5 x 5
Input power (max.) (mW) [2-3]	300
Pigtail length (m)	1
Optical connectors CC	FC/APC, FC/PC, SC/APC, SC/PC (0.9 mm buffered fiber)

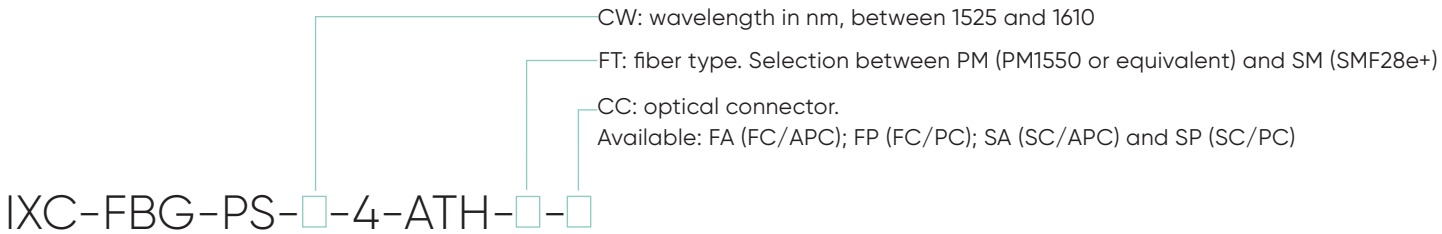
Comments:

[1] Referenced to vacuum at ± 0.05 nm, slow axis (PM fiber)

[2] Maximum input power: damage power threshold

[3] Recommended input power for stable filter operation is below 10 mW

Ordering Information



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