

FIBER BRAGG GRATING

IXC-FBG-PS-1054-2-ATH-PM-FA

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 stop-band.

The filter we propose is a customer inspired product with an original wavelength at 1054 nm and a band pass linewidth lower than 2 GHz.



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

- Ultra-narrow band-pass filter down to 2 GHz FWHM
- Tailored transmission
- Filtering at specific wavelength
- Low insertion loss
- High temperature stability within a 1 pm/°C
- ± 50 pm fine tuning with our specific athermal package

Applications

- Free-space quantum-key distribution (QKD)
- Laser communication
- Lidar
- Lines filtering for lasers and sensors
- Linewidth reduction
- Frequency conversion

IXC-FBG-PS-1054-2-ATH-PM-FA

Ultra-Narrow Bandwidth Band-Pass Filter

TECHNICAL SPECIFICATIONS

Parameters

Band-pass center wavelength CW (nm) ¹	1054 ± 0.05
Band-pass bandwidth (FWHM) (GHz)	< 2
Rejection bandwidth ΔV_{-3dB} (GHz)	> 125
Insertion loss IL (dB) ²	< 1
Out-of-band attenuation ΔT at ± 10 GHz (dB)	> 20
Tuning range (pm)	± 50
Tuning resolution (GHz)	1
CW thermal drift [- 5 ; 70]°C (pm)	< 150
Packaging (mm)	55 x 5 x 5
Input power (max.) (mW) ³⁻⁴	300
Pigtail length (m)	1
Optical connectors CC	FC/APC (0.9 mm buffered fiber)

Comments:

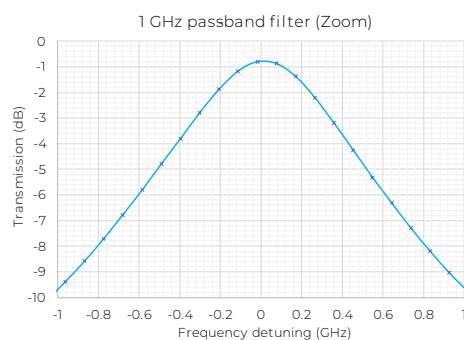
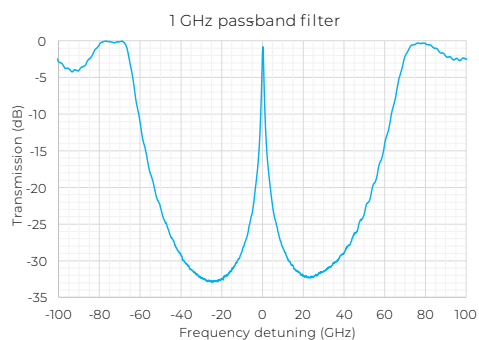
¹ Referenced to vacuum at ± 0.05 nm, slow axis (PM fiber)

² By design

³ Maximum input power: damage power threshold

⁴ Recommended input power for stable filter operation is below 10 mW

Typical spectrum (measured in transmission)



Exail reserves the right to change, at any time and without notice, the specifications, design, function or form of its products described herein.

contact.photonics@exail.com | www.exail.com
Europe +33 1 30 08 94 50 | Americas +1 508 745 3487 | APAC +60 11 1623 1698

exail