FIBER BRAGG GRATING

IXC-FBG-PS-1064-2-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 1064 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

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IXC-FBG-PS-1064-2-ATH-PM-FA
Ultra-Narrow Bandwidth Band-Pass Filter
TECHNICAL SPECIFICATIONS

Parameters

Band-pass center wavelength CW (nm) [1]	1064 ± 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)