Fiber Fabry-Perot Tunable Filter | FFP-TF2

Description

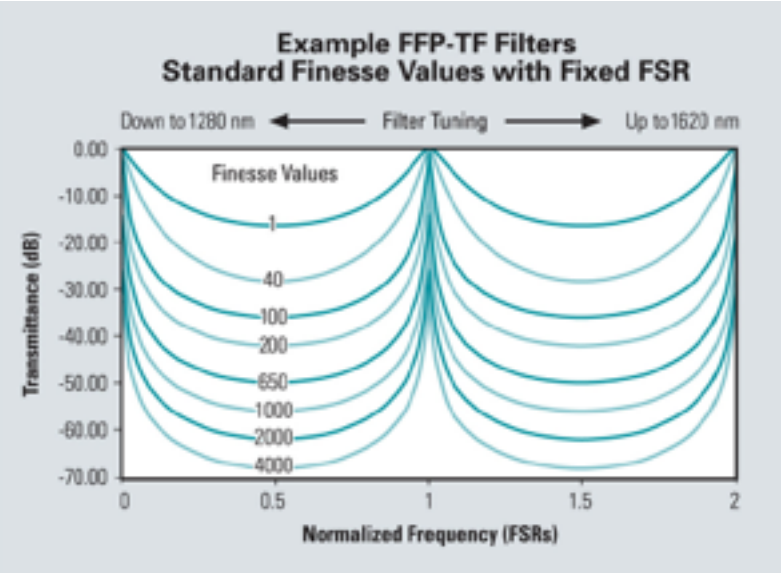
Micron Optics' patented FFP-TF all-fiber Fabry-Perot (FFP) Tunable Filter achieves high finesse and maintains low loss in a rugged package.

The key to the simple and elegant design of the FFP tunable filter is the lensless fiber construction. There are no collimating optics or lenses, thus the FFP tunable filter Micron Optics has eliminated the pitfalls of other Fabry-Perot component technologies, including misalignment, environmental sensitivity, and extraneous modes.

The all-fiber FFP tunable filter follows the Airy function so closely that engineers can design it into the opto-electronic OEM systems knowing that it will provide results very close to the theoretical mathematical model.

An all-fiber Fabry-Perot **super-cavity** in a robust, Telcordia qualified package.

The FFP-TF2 design provides improved etalon alignment for stable long-term, high reliability, and Telcordia-qualified performance at a more attractive price. Several standard low-cost configurations are readily available for quick delivery. Custom high performance multi-band configurations are also available for special uses including sensing, biotech, and scientific applications.



Key Features

All-fiber platform

- **High resolution** and **low loss design**
- **Super-cavity finesses**
- **Vibration** and **shock resistant**
- **Thermally stable**
- **Large dynamic range** permits accurate measurements

Ideal for OEM applications

- **Customizable** free spectral range, finesse and bandwidth
- Tunable across **O, E, S, C & L bands**
- **Small** footprint
- **Low power** requirements
- **Telcordia GR 2883** qualified

OEM Applications

- **Optical Performance Monitoring**
- **Spectrum Analysis**
- **Tunable Optical Noise Filtering**
- **Tunable Channel Drop for Ultra DWDM**
- **Tunable Sources**
- **Optical Sensing**

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Optical Properties[1]	FFP-TF2		
Operating wavelength range	O-Band 1260-1360 nm C-Band 1520-1570 nm	E-Band 1360-1480 nm L-Band 1570-1620 nm	S-Band 1480-1520 nm C&L Band 1520-1620 nm
Free spectral range[2]	100 to 45,000 GHz (800 pm to 340 nm @ 1550 nm)		
Finesse	10, 40, 100, 200, 500, 650, 1000, 2000, 4000, 10,000		
Bandwidth, (FWHM or 3dB)	FSR/Finesse		
Insertion loss	< 1.5 dB		
Polarization dependent loss	< 0.2 dB		
Input power	100 mW (for finesse = 200)		
Glitch free dynamic range	> 15 dB		
Electrical Properties			
Tuning voltage/FSR	< 18 V		
Tuning rate/FSR	800 Hz		
Capacitance	< 3 uF		
Tuning voltage, maximum	70 V		
Mechanical Properties			
Dimension; Weight	13.5 mm x 25.8 mm x 57.2 mm; 53 g		
Cable jacket	900 um loose buffer tubing		
Cable length	> 1 m		
Environmental Properties[4]			
Operating temperature	-20 to 80 C		
Change in voltage	< 18 V		
Change in insertion loss	< 0.5 dB		

Special OEM Options

Contact Micron Optics

Wavelength Range: 800 - 1620 nm

Finesse: up to 16,000

Bandwidth: from MHz to GHz

Ordering Information

FFP-TF2 wwww - bbb u ffff - ii - ccc

wwww	1310	(1260-1360 nm)
	1550	(1520-1570 nm)
	1420	(1360-1480 nm)
	1600	(1570-1620 nm)
	1500	(1480-1520 nm)
	1580	(1520-1620 nm)
bbb	Specify bandwidth For example, 040 = 40 GHz	
u	Bandwidth unit	
	G	GHz
	M	MHz
ffff	Specify finesse For example, 0650 = finesse of 650	
ii	Specify insertion loss For example, 2.5 = 2.5 dB loss	
ccc		Unconnectorized
	061	FC/APC (fusion spliced)
	063	SC/APC (fusion spliced)
	065	FC/APC (connectorized)

Notes

1 Specifications are dependent on filter configuration. Please contact Micron Optics for final specifications.

2 FSRs are fixed but customizable within these ranges.

3 Captures effects of long term use over full operating temperature range of the instrument.

4 Complies to Telcordia GR 2883.

MICRON OPTICS

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