



Manual Etalon-Based Fiber Optic Tunable Filter Long Range (patent pending)

Product Description

Based on a proprietary thin film cavity filter technology, we produce Fiber Optic Tunable Filters with exceptionally wide tuning range over 120nm. This is achieved by a patent pending configuration that combines multiple filters in the light path. The wavelength tuning is made by manually rotating two precise micrometers; each filter moves into the light path sequentially. Our unique low insertion loss design presents a cost-effective solution for long range fiber tunable filter.



Features

- Compact and Low Cost
- Wide Tune Range
- Wide Wavelength
- Low IL and PDL

Performance Specifications

Parameter		Min	Typical	Max	Unit
Wavelength Coverage	1020-1080,	1450-1580,	1510-1640,	1950-2080	nm
Tuning Resolution ^[1]		-	0.1	-	nm
Insertion Loss ^[2]		2	2.6	4	dB
Bandwidth @-3dB		-	1	1.2	nm
Bandwidth @-20dB		-	10	-	nm
Off-Band Suppression		-	30	-	dB
PDL (SM fiber only)		-	0.15	0.35	dB
PMD (SM fiber only)		-	-	0.5	ps
Extinction Ratio (PM fiber only)		18	23	-	dB
Return Loss		40	-	-	dB
Optical Power Handling (CW)	Standard version	-	0.5		W
	High power version		3		W
Operating Temperature		0	20	60	° C
Storage Temperature		-10	-	70	° C

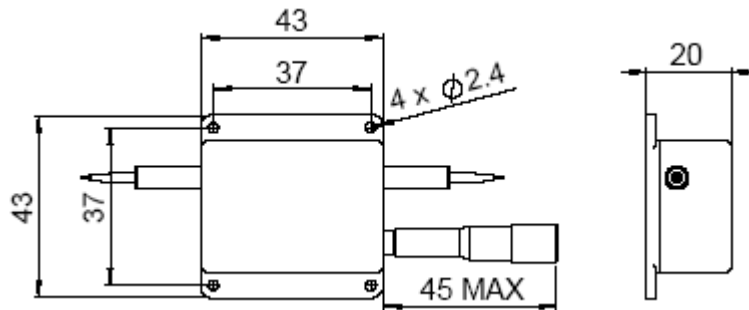
[1]. Longer the wavelength, larger the tuning range
 [2]. Measured using a broadband light source with integration of the transmission peak. If the laser source does not matching the filter profile, extra loss can occur. Special filter can be made to match the application. Smaller the fiber core, higher the loss. Excluding connector loss

Applications

- DWDM networks
- Fiber Sensing
- ASE control
- Tunable Fiber Laser

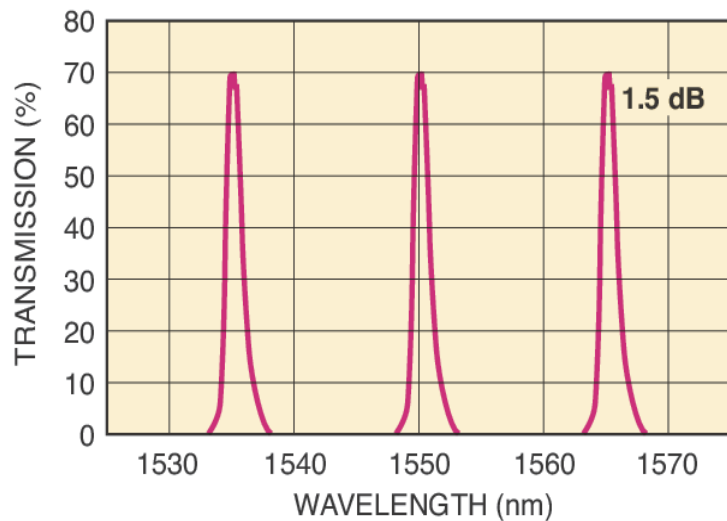
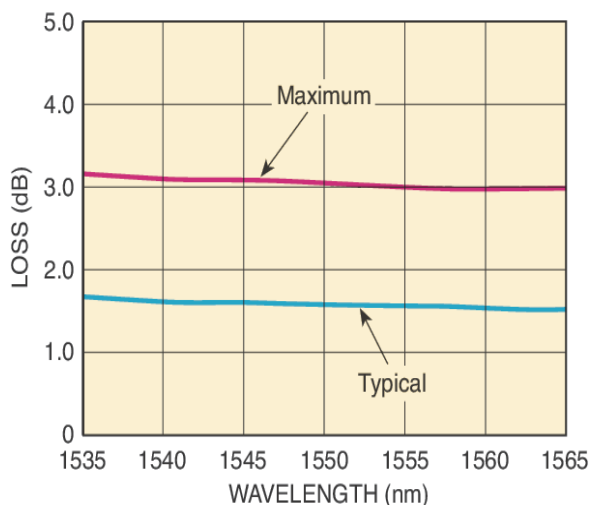
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Mechanical Dimension (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Typical Transmission Curve



Ordering Information

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	Type	Wavelength Range	Optical Power	Package	Fiber Type		Fiber Length	Connector
		1950-2280nm = 1 1920-2160nm = 2 1800-2050nm = 3 1800-2280nm = 4 1510-1660nm = 5 1440-1660nm = 6 1270-1590nm = 7 1090-1170nm = 8 950-1100nm = 9 Special = 0	Standard= 1 High power= 2		SMF-28 = 1 HI1060 = 2 PM980 = 3 PM1550 = 4 Special = 0	Bare fiber = 1 900um tube= 3 Special= 0	0.25m= 1 0.5m = 2 1.0 m= 3 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC = 7 Special = 0

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How to test insertion loss of a tunable filter

1. Connect a broadband fiber-coupled laser source to OSA, sweep one time over the specified range of the tunable filter, then fix the curve in Trace A as reference.
2. Connect the broadband laser source to the fiberoptic tunable filter fiber as input, then connect the other fiber port of the tunable filter as the output to the OSA.
3. Set OSA Trace B as 'write,' Trace C as 'Calculate: B-A.' Auto sweep Trace C from the specific range. Tune the micrometer to shift the peak at a different wavelength. Use 'Peak search' to record IL at a different wavelength.