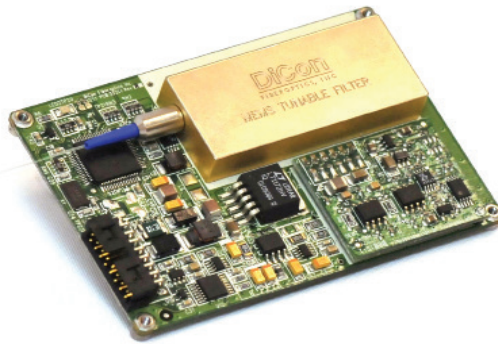


# MEMS TUNABLE FILTER

DiCon's MEMS Tunable Filter is a compact 2-port device based on DiCon's proprietary MEMS technology. It de-multiplexes the incoming multi-wavelength signal and selects the desired wavelength channel using a tilting MEMS mirror as the tuning mechanism. The optical design is an extension of DiCon's proven MEMS switch design, and therefore offers the same durability, reliability, and stability. DiCon's MEMS Tunable Filter is an ideal component for use in all wavelength selection and monitoring applications, and is particularly well-suited for applications requiring frequent or continuous tuning.



## FEATURES

- Excellent MEMS durability, thermal stability, and repeatability
- Superior optical performance
- Compact form factor
- Gaussian-shaped passband
- Passband optimized for 100 GHz channel spacing
- Customized passbands and tuning ranges available
- I2C and RS232 control interface included

## APPLICATIONS

- Optical Channel Performance Monitoring
- ROADM
- Noise Suppression
- Signal Tracking



# MEMS TUNABLE FILTER

## OPTICAL SPECIFICATIONS

PARAMETER		RATING
Tuning Range	O-Band (13E1)	1260 to 1340 nm
	O-Band (13E3)	1280 to 1360 nm
	C&L-Band	1529 to 1610 nm
Insertion Loss @ Peak <sup>1</sup>	4.5 dB max.	
Bandwidth @ 3 dB	0.32 nm min.	
Bandwidth @ 20 dB	1.90 nm max.	
Back Reflection	-35 dB max.	
PDL	0.4 dB max.	
$\lambda$ Setting Error	+/- 50 pm max.	
Tuning Resolution	10 pm	
Tuning Speed	30 ms max.	
Optical Power	500 mW max.	
Durability	1 billion cycles min.	
Operating Temp	-5 to 70 °C	
Storage Temp	-40 to 85 °C	
Fiber Type	9/125 $\mu$ m single mode	

1. IL measured at 25 °C. IL < 5.0 dB over entire operating temperature range.

## ORDERING INFORMATION

MTF800A - 0.32 -  - 9 - 2B -  -

### Bandwidth @ 3 dB

0.32 0.32 nm min

### Tuning Range

13E1 1260-1340 nm  
13E3 1280-1360 nm  
15/16 1529-1610 nm

*Custom Tuning Range Available Upon Request*

### Fiber Type

9 9/125  $\mu$ m single mode fiber

### Jacket Type

2B 250  $\mu$ m barefiber

### Connector Type

FC FC/SPC  
FC/APC FC/APC  
N NONE

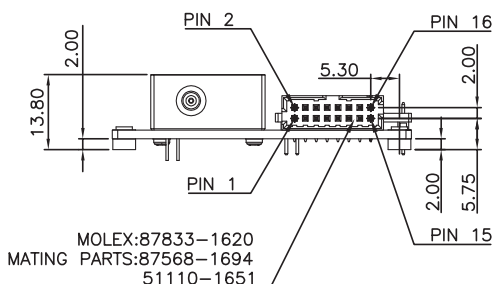
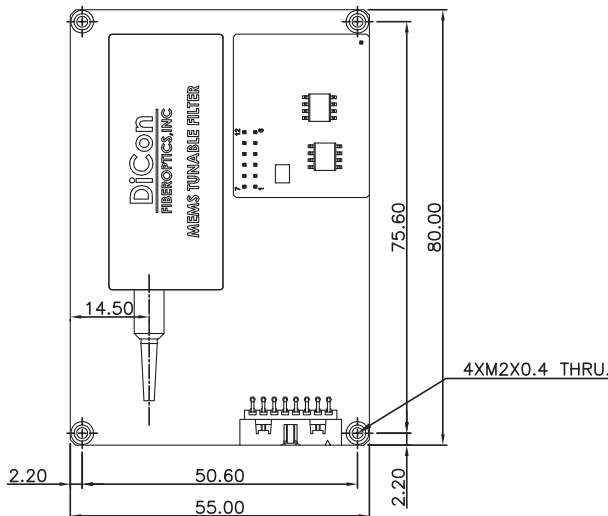
*Also Available: SC, SC/UPC, SC/APC, ST, ST/UPC, LC*

### Pigtail Length

1 1 Meter  
X Specify X Meters

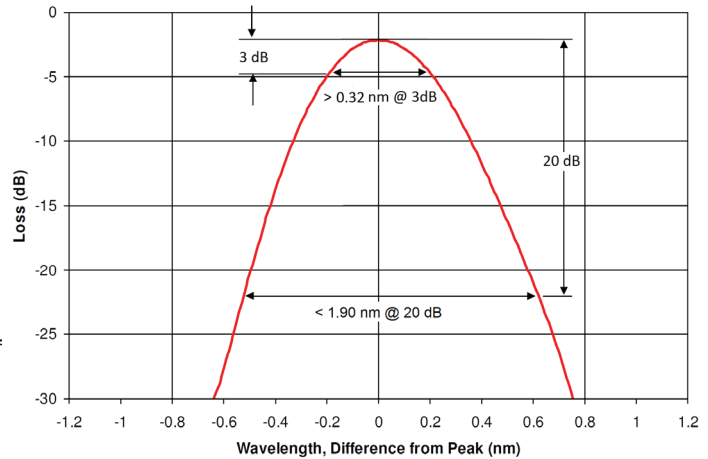
## MECHANICAL DIMENSIONS

(Units: mm)



MOLEX:87833-1620  
MATING PARTS:87568-1694  
51110-1651

## OPTICAL SPECTRUM



## ELECTRICAL SPECIFICATIONS

PARAMETER	RATING
Latching Type	non-latching
Control Type	I <sup>2</sup> C and RS232
Vcc Voltage	12 VDC
Power Consumption	1.6 W max.
Vcc Damage Threshold	15 VDC