

## MEMS TUNABLE FILTER (TYPE A)

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 (TYPE A)

## OPTICAL SPECIFICATIONS

PARAMETER		RATING
Tuning Range	C-Band	1529 to 1564 nm
	L-Band	1575 to 1610 nm
Min IL @ Peak <sup>1</sup>		< 3.5 dB
Bandwidth @ 3 dB		> 0.34 nm
Bandwidth @ 20 dB		< 1.40 nm
Back Reflection		> 40 dB
PDL		< 0.3 dB
$\lambda$ Setting Error		< +/- 50 pm
Tuning Resolution		10 pm
Tuning Speed		< 30 ms
Optical Power		< 500 mW
Durability		> 1 billion cycles
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 < 4.0 dB over entire operating temperature range.

## ORDERING INFORMATION

MTF500A - 0.34 -  - 9 - 2B -  -

### Bandwidth @ 3 dB

0.34 0.34 nm min

### Tuning Range

15 1529-1564 nm  
 16 1575-1610 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

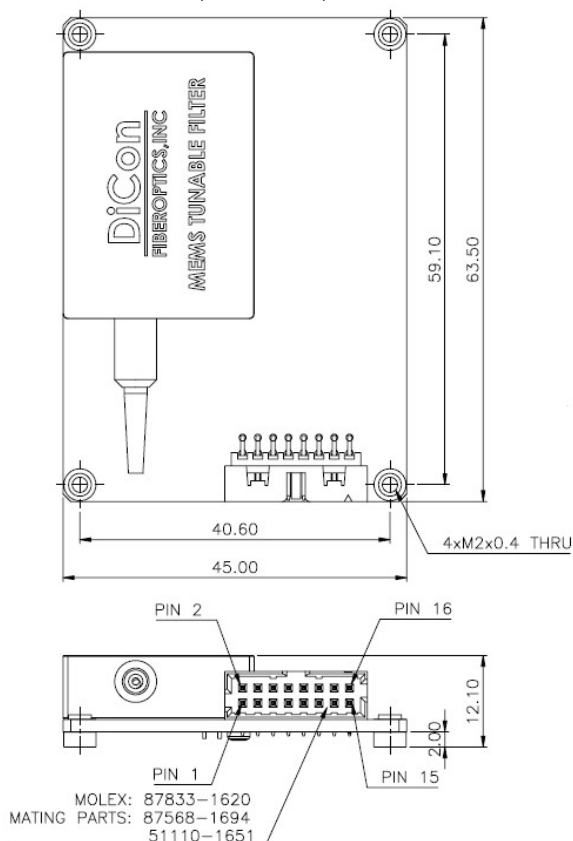
FC FC/SPC  
 FC/APC FC/APC  
 N NONE  
*Also Available: SC, SC/UPC, SC/APC, ST, ST/UPC, LC*

### Pigtail Length

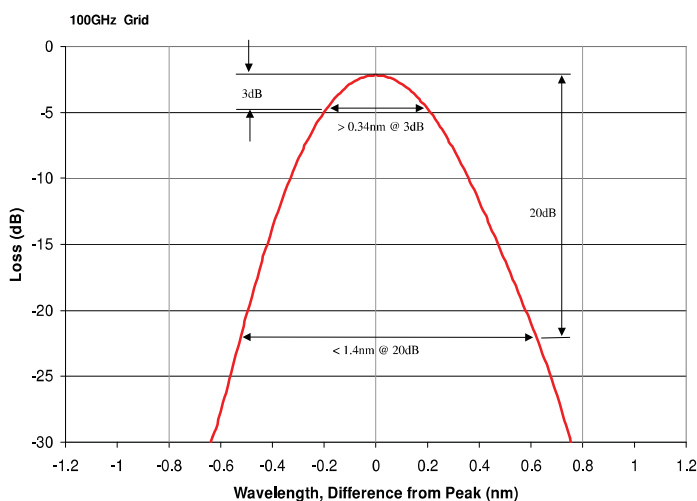
1 1 Meter  
 X Specify X Meters

## MECHANICAL DIMENSIONS

(Units: mm)



## 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	< 1.4 W
Vcc Damage Threshold	15 VDC