# MEMS ULTRA-COMPACT WIDEBAND TUNABLE FILTER

DiCon's MEMS Ultra-Compact Wideband Tunable Filter is optimized for ASE noise suppression and signal clean up applications. It features a compact form factor for easier integration and utilizes DiCon's proven high reliability, long life MEMS technology.

This tunable filter operates by using a grating to de-multiplex the incoming light and then precisely directs the requested passband to the output fiber, using a patented ultra-stable and reliable MEMS mirror.



## **FEATURES**

- Ultra-Compact Design
- Typical 3 dB Bandwidths from 100 to 250 GHz
- Proven MEMS Durability & Reliability
- Hermetically Sealed
- Fast Tuning Speed
- Extremely Low Power Consumption ≤ 160 μW

## **APPLICATIONS**

- Noise Suppression (eg. for ASE noise)
- Signal Clean Up



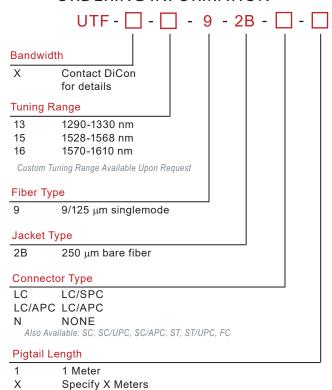
## MEMS ULTRA-COMPACT WIDEBAND TUNABLE FILTER

#### OPTICAL SPECIFICATIONS<sup>1</sup>

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PARAMETER	RATING
IL @ Peak <sup>2</sup>	3.0 dB max.
Bandwidth @ 3 dB	Contact DiCon for details
	Typically from 100 to 250 GHz other bandwidth options are available
Back Reflection	-35 dB max.
PDL <sup>2</sup>	0.30 dB max.
Tuning Resolution	10 pm
Tuning Speed <sup>3</sup>	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 μm singlemode

- 1. All specifications are referenced without connectors.
- 2. Measured at room temperature.
- 3. Only guaranteed when used with optimized control HW/FW.

#### ORDERING INFORMATION



#### **ELECTRICAL SPECIFICATIONS**

PARAMETER	RATING
Latching Type	Non-latching
Control Type	Direct Voltage <sup>1</sup>
Vcc Voltage	0-45 VDC
Vcc Damage Threshold	50 VDC
Power Consumption	160 uW max.

<sup>1.</sup> Tolerance is +/-10 mV to meet optical specifications.