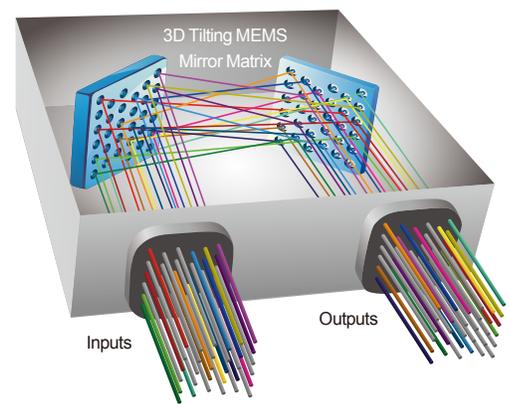
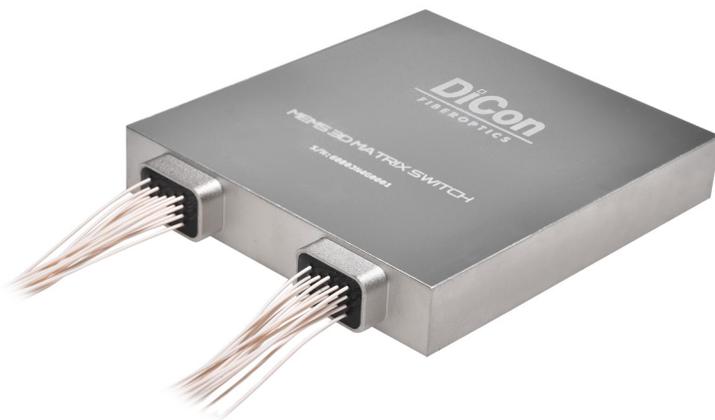


# 16X16 MEMS 3D MATRIX OPTICAL SWITCH

DiCon's MEMS 3D Matrix Optical Switch is a proprietary optical switch structure that allows any of the inputs to connect to any of the outputs in a fully non-blocking, all-optical cross-connect configuration. This innovative design is based on DiCon's industry proven MEMS mirror technology and offers the same level of durability and reliability that can be expected from any of the DiCon's MEMS fiber optic switch solutions.

## OPERATING PRINCIPLE (ANY PORT TO ANY PORT FUNCTIONALITY)



## FEATURES

- High Reliability
- Proven MEMS Technology
- Lifetime > 1 Billion Switch Cycles
- Available in any MxN configuration up to 16x16

## APPLICATIONS

- Dynamic Management of Optical Networks
- Configurable Test & Measurement
- ROADM



# 16X16 MEMS 3D MATRIX OPTICAL SWITCH

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

PARAMETER		RATING
Insertion Loss <sup>2</sup>	8x8	0.8 dB typ. 1.4 dB max.
	16x16	0.8 dB typ. 1.4 dB max.
Crosstalk		-70 dB typ. -55 dB max.
Back Reflection		-55 dB typ. -45 dB max.
Switching Time		15 ms typ. 20 ms max.
TDL		0.1 dB typ. 0.4 dB max.
WDL <sup>3</sup>		0.1 dB typ. 0.4 dB max.
PDL		0.08 dB typ. 0.25 dB max.
Repeatability <sup>4</sup>		0.01 dB typ. 0.06 dB max.
Durability		10 <sup>9</sup> cycles min.
Optical Power		500 mW max.
Operating Temperature		-5 to 70°C
Storage Temperature		-40 to 85°C
Fiber Type		9/125 μm Single-mode

1. All specifications are without connectors for the set wavelength band index.

Note: Each wavelength band has its own wavelength index, which can be set to optimized the optical performance for that band. Only one wavelength index band can be selected at a time and it applies to all the ports on the module.

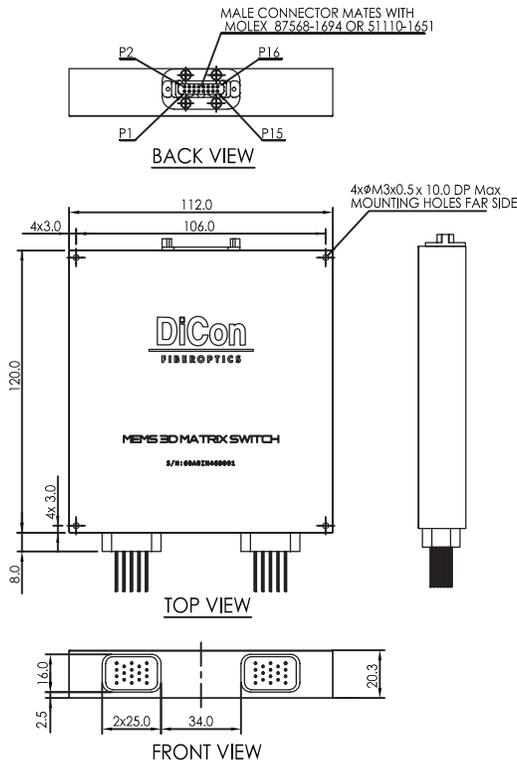
2. IL is measured at CWL for the set wavelength index at 23°C +/- 5°C. Operation in 1290-1330nm or 1570-1610 nm bands add 0.1 dB to the typical IL and add 0.2 dB to the maximum insertion loss.

3. WDL is measured from CWL in a +/- 20nm range at 23°C +/- 5°C.

4. Repeatability is defined within 100 cycles.

## MECHANICAL DIMENSIONS

(Units: mm)



## ORDERING INFORMATION

MN4 -  -  -  -  -  -  -

<b>Product Code</b>		MN4	MEMS 3D Matrix
<b>Switch Configuration</b>		MxN	MxN Non-Blocking (Specify M,N≤16)
<b>Control Interface</b>		I2C RS2	I <sup>2</sup> C RS232
<b>Wavelength Range</b>		13 15 16 13/15 15/16 13/15/16	1290 - 1330 nm 1530 - 1570 nm 1570 - 1610 nm 1290 - 1330 nm & 1530 - 1570 nm 1530 - 1570 nm & 1570 - 1610 nm 1290 - 1330 nm & 1530-1570 & 1570-1610 nm
		<i>Other wavelengths available upon special request</i>	
<b>Fiber and Jacket Type</b>		9/TB	Corning SMF-28, Tight Buffer <i>Or other equivalent 9um Single-mode fiber</i>
<b>Connector Type</b>		FC/SPC FC/APC LC/SPC LC/APC SC/SPC SC/APC N	FC/SPC FC/APC LC/SPC LC/APC SC/SPC SC/APC NONE <i>Other connector types are also available</i>
<b>Pigtail Length</b>		1 X	1 Meter Specify X Meters <i>Tolerance is +/- 0.05 m</i>

## ELECTRICAL SPECIFICATIONS

PARAMETER		RATING
Latching Type		Non-latching
Control Type		I <sup>2</sup> C or RS232
Vcc Voltage		12 VDC
Power Consumption	Start Up	7.5 W max.
	Operating	1.0 W max.
Connector Type		Molex 87833-1620