

MEMS 3D MATRIX OPTICAL SWITCH

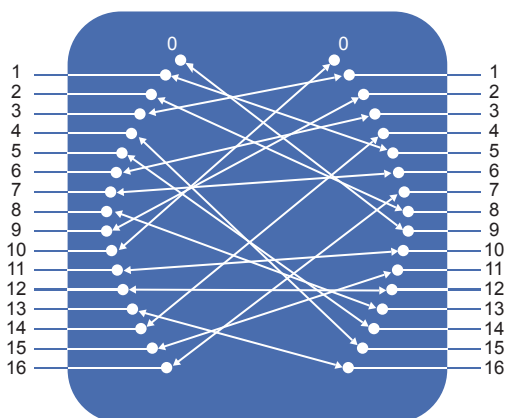
OVERVIEW

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 DiCon's MEMS fiber optic switch solutions.

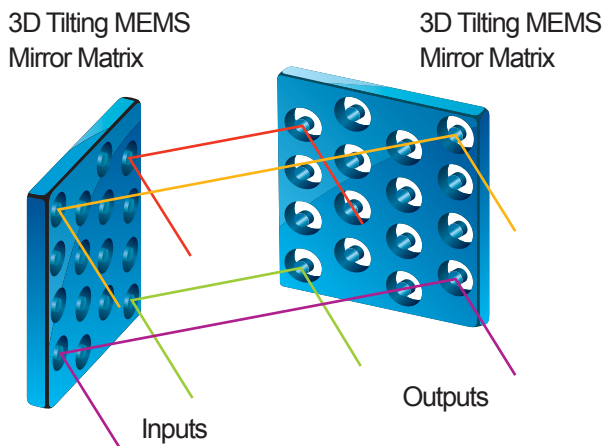
FEATURES

- Proven MEMS Durability and Reliability
- Available in Any MxN Size up to 16x16
- New Compact Form Factor
- Low Insertion Loss

3D MATRIX CONFIGURATION



OPERATING PRINCIPLE (ANY PORT TO ANY PORT FUNCTIONALITY)



APPLICATIONS

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

OPTICAL SPECIFICATIONS¹

PARAMETER		RATING
Insertion Loss ²	Single-Band	1.8 dB max.
	Dual-Band	2.0 dB max.
Crosstalk		-60 dB max.
Back Reflection		-45 dB max.
Switching Time		40 ms max.
TDL		0.4 dB max.
WDL ³		0.4 dB max.
PDL		0.3 dB max.
Repeatability ⁴		0.04 dB max.
Durability		10 ⁹ cycles min.
Optical Power		500 mW max.
Operating Temp		-5°C to 70°C
Storage Temp		-40°C to 85°C
Fiber Type		9/125 μm single mode

1. Specifications are without connectors.
2. IL is measured at CWL, 23°C.
3. WDL is measured in a +/- 20nm range at 23°C.
4. Repeatability is defined after 100 cycles.

ELECTRICAL SPECIFICATIONS

PARAMETER	RATING
Latching Type	Non-latching
Control Type	I ² C or RS232
Vcc Voltage	12 VDC
Power Consumption	5 W max.
Connector Type	Molex 87833-1620

ORDERING INFORMATION

MG4 - - - - - -

Product Code

MG4 MEMS 3D Matrix

Switch Configuration

MxN MxN Non-Blocking
(Specify M,N ≤ 16)

Control Interface

I²C I²C
RS2 RS232

Wavelength Range

13 1290 - 1330 nm
15 1530 - 1570 nm
16 1570 - 1610 nm
13/15 1290 - 1330 & 1530 - 1570 nm
15/16 1530 - 1570 & 1570 - 1610 nm

Fiber and Jacket Type

9/TB Corning SMF-28, Tight Buffer
Or other equivalent 9/125 μm single mode

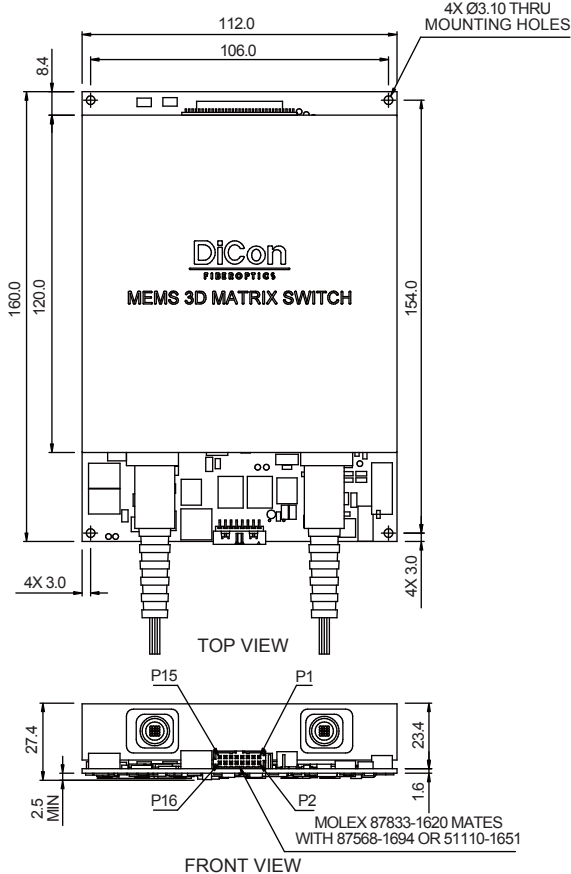
Connector Type

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

Pigtail Length

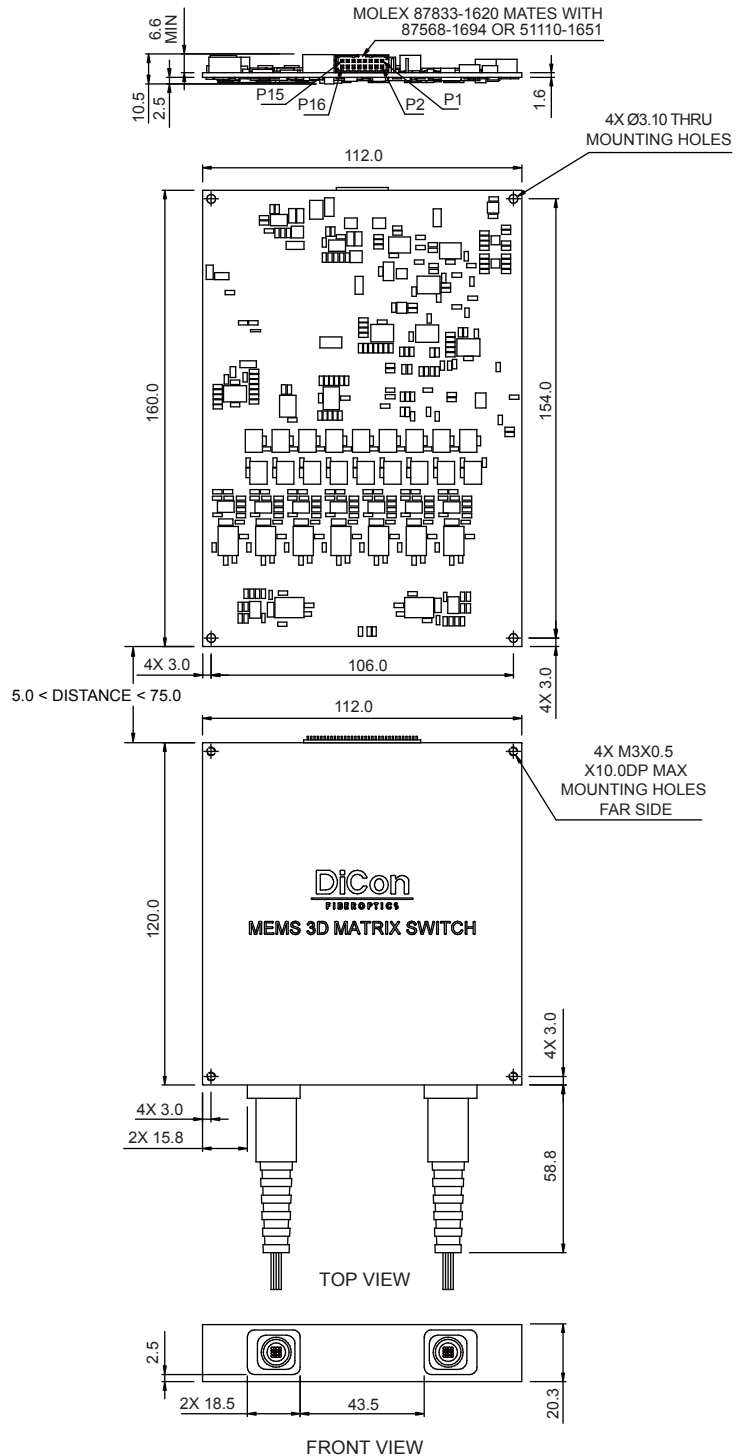
1 1 Meter
X Specify X Meters
Tolerance is +/- 0.05 m

OPTICAL MODULE ON CONTROL BOARD



MECHANICAL DIMENSIONS (Units: mm)

OPTICAL MODULE TO THE SIDE OF CONTROL BOARD



Note: Optical module may be mounted on top of the control board or to the side.