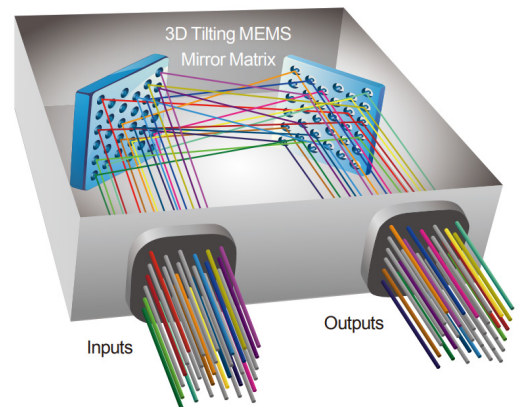# PM MEMS 3D MATRIX OPTICAL SWITCH

DiCon's PM 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 72x72

APPLICATIONS

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

DiCon
FIBEROPTICS, INC

PM MEMS 3D MATRIX OPTICAL SWITCH

OPTICAL SPECIFICATIONS[1]

PARAMETER		RATING	
Insertion Loss[2]	32x32	0.8 dB typ.	1.4 dB max.
	72x72	0.8 dB typ.	1.4 dB max.
Crosstalk		-70 dB typ.	-55 dB max.
Back Reflection		-55 dB typ.	-45 dB max.
Extinction Ratio		18 dB min	
Switching Time		30 ms typ.	35 ms max.
TDL		0.1 dB typ.	0.4 dB max.
WDL[3]		0.1 dB typ.	0.4 dB max.
Repeatability[4]		0.01 dB typ.	0.06 dB max.
Durability		10^9 cycles min.	
Optical Power		500 mW max.	
Operating Temperature		-5 to 70°C	
Storage Temperature		-40 to 85°C	
Fiber Type		Panda Fiber	

1. All specifications are without connectors at room temp.
2. IL is measured at CWL.
3. WDL is measured from CWL in a +/- 20nm range.
4. Repeatability is defined within 100 cycles.

MECHANICAL DIMENSIONS
(Units: mm)

MALE CONNCETOR MATES WITH
MOLEX 87568-1697 OR 51110-1651

FRONT VIEW

ORDERING INFORMATION

MN8 - ☐ - ☐ - ☐ - ☐ - ☐ - ☐ - ☐

Product Code

MN8   MEMS 3D Matrix

Switch Configuration

MxN   MxN Non-Blocking
             (Specify M,N≤72)

Control Interface

I2C I^2C
RS2   RS232

Wavelength Range

13   1290 - 1330 nm
15   1530 - 1570 nm
16   1570 - 1610 nm
Other wavelengths available upon special

Connector Key Orientation

PMF   Fast axis
PMS   Slow axis
PMN   No connector

Fiber and Jacket Type

PM13/LT   Corning PM 1300 Fiber, 900 um loose tube
               over 250 um barefiber
PM15/LT   Corning PM 1550 Fiber, 900 um loose tube
               over 250 um barefiber
Other fiber types are also available
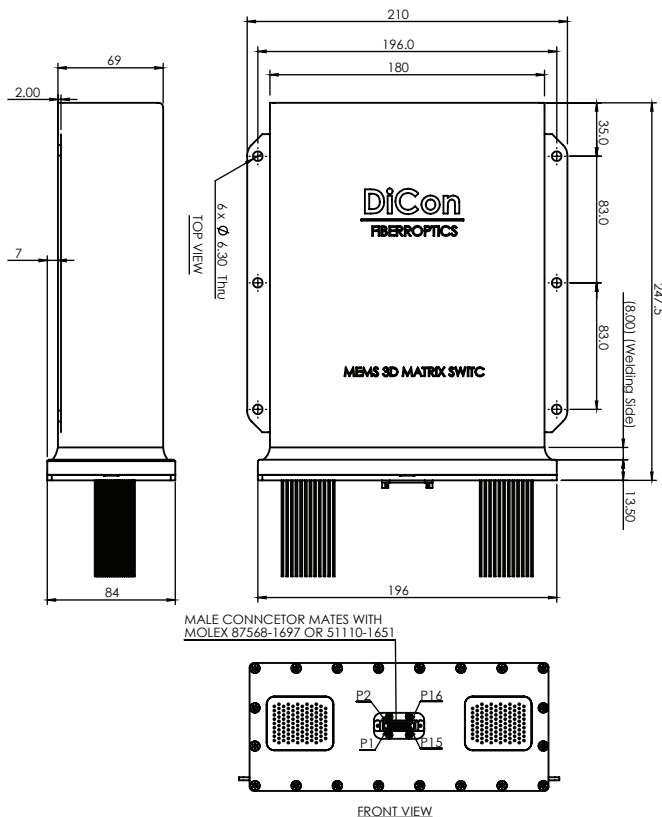
Connector Type

FC/SPC   FC/SPC
FC/APC   FC/APC
LC/SPC   LC/SPC
LC/APC   LC/APC
SC/SPC   SC/SPC
SC/APC   SC/APC
N   NONE
Other connector types are also available

Pigtail Length

1   1 Meter
X   Specify X Meters

Tolerance is +/- 0.05 m

ELECTRICAL SPECIFICATIONS

PARAMETER		RATING
Latching Type		Non-latching
Control Type		I^2C or RS232
Vcc Voltage		12 VDC
Power Consumption	Start Up	24 W max.
	Operating	19 W max.
Connector Type		Molex 87833-1620

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