## 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 $24 \times 24$


## APPLICATIONS

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


## PM MEMS 3D MATRIX OPTICAL SWITCH

OPTICAL SPECIFICATIONS¹

| PARAMETER |  |
| :--- | :--- |
| Insertion <br> Loss |  |
|  | $16 \times 16$ |
|  | $24 \times 24$ |
| Crosstalk | 0.8 dB typ. 1.4 dB max. |
| Back Reflection | -70 dB typ. $\quad-55 \mathrm{~dB}$ max. |
| Extinction Ratio | -55 dB typ. -45 dB max. |
| Switching Time | 18 dB min |
| TDL | 0.1 dB typ. 20 ms max. 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 | $10^{\circ} \mathrm{cycles}$ min. |
| Optical Power | 500 mW max. |
| Operating Temperature | -5 to $70^{\circ} \mathrm{C}$ |
| Storage Temperature | -40 to $85^{\circ} \mathrm{C}$ |
| 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 $+/-20 \mathrm{~nm}$ range.
4. Repeatability is defined within 100 cycles.

## MECHANICAL DIMENSIONS

(Units: mm)


ORDERING INFORMATION



Wavelength Range

| 13 | $1290-1330 \mathrm{~nm}$ |
| :--- | :--- |
| 15 | $1530-1570 \mathrm{~nm}$ |
| 16 | $1570-1610 \mathrm{~nm}$ |
| 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 $+/-0.05 \mathrm{~m}$ |  |

ELECTRICAL SPECIFICATIONS

| PARAMETER | RATING |
| :--- | :--- |
| Latching Type | Non-latching |
| Control Type | $I^{2} \mathrm{C}$ or RS232 |
| Vcc Voltage | 12 VDC |
| Power | Start Up |
| Consumption | 9.0 W max. |
| Operating | 1.6 W max. |
| Connector Type | Molex $87833-1620$ |

