

PM MEMS 1XN OPTICAL SWITCH

DiCon's PM MEMS 1xN Optical Switch provides channel selection between a single input fiber and N output fibers. At the core of the switch is DiCon's proprietary MEMS chip; an electrostatically driven mirror implemented using single-crystalline silicon and a stiction-free design. The mirror is capable of rotating on two axes, allowing the input light to be redirected back to any desired output. The switch is bi-directional and can be used as a Nx1 selector. switch.



FEATURES

- Proven MEMS Durability and Reliability
- Compact Form Factor
- High Extinction Ratio
- Lifetime > 1 Billion Switch Cycles

APPLICATIONS

- Optical Communications
- Fiber Optic Sensing
- Source Selection



PM MEMS 1xN OPTICAL SWITCH

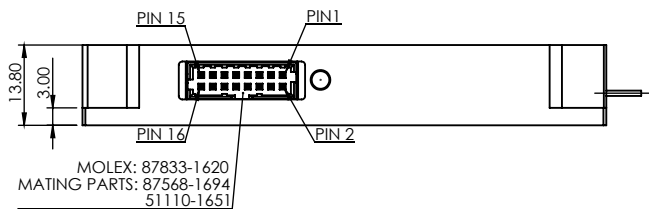
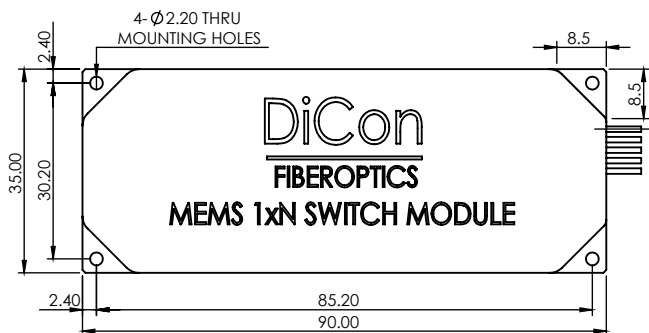
OPTICAL SPECIFICATIONS¹

PARAMETER		RATING
Insertion Loss ²	1x2	1.0 dB max.
	1x3, 1x4	1.5 dB max.
Crosstalk ³		-50 dB max.
Back Reflection		-50 dB max.
TDL		0.25 dB max.
WDL ⁴		0.30 dB max.
Extinction Ratio		18 dB min.
Repeatability ⁵		+/- 0.05 dB max.
Optical Power		500 mW max.
Durability		10 ⁹ cycles min.
Switching Time		30 ms max.
Operating Temp		-5 to 70°C
Storage Temp		-40 to 85°C
Fiber Type		9/125 Panda Fiber

- Specifications are without connectors.
- IL is measured at CWL, 23°C.
- Power off isolation is same as crosstalk.
- WDL is measured in a +/- 20nm range at 23°C.
- Repeatability is defined after 100 cycles.

MECHANICAL DIMENSIONS

(Units: mm)



ORDERING INFORMATION

ML1 - □ - □ - □ - □ - □ - □ - □

Product Code

ML1 PM MEMS Switch Module

Switch Configuration

1xN 1xN
Specify N ≤ 4

Control Interface

I²C I²C
RS2 RS232
TTL TTL

Wavelength Range

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

Connector Key Orientation

PMF Fast axis
PMS Slow axis
PMN No connector

Fiber and Jacket Type

2B 9/125 µm Panda fiber, 250 µm bare fiber
2/LT 9/125 µm Panda fiber, 900 µm loose tube

Connector Type

FC/SPC FC/SPC
FC/APC FC/APC
N NONE

Also Available: SC, SC/UPC, SC/APC, ST, ST/UPC, LC

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 ² C, RS232 or TTL
Vcc Voltage	12 VDC
Power Consumption	800 mW max.
Vcc Damage Threshold	15 VDC
Connector Type	Molex 87833-1620