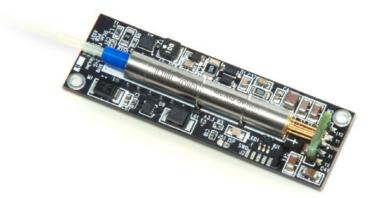# PM MEMS 1XN OPTICAL SWITCH
WITH EXTERNAL PCB

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

DiCon
FIBEROPTICS

PM MEMS 1XN OPTICAL SWITCH

WITH EXTERNAL PCB

OPTICAL SPECIFICATIONS[1]

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		9/125/250μm Panda Fiber

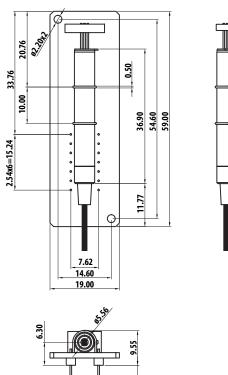1. Specifications are without connectors.
2. IL is measured at CWL, 23°C.
3. Power off isolation is same as crosstalk.
4. WDL is measured in a +/- 20nm range at 23°C.
5. Repeatability is defined after 100 cycles.

MECHANICAL DIMENSIONS
(Units: mm)

ORDERING INFORMATION

MLC - ☐ - ☐ - ☐ - ☐ - 2B - ☐ - ☐

Product Code

MLC	PM MEMS Switch

Switch Configuration

1xN	1xN Specify N ≤ 4

Control Interface

TTL	TTL
I2C	I²C

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 with 250 μm buffer

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	I²C and TTL
Vcc Voltage	12 VDC
Power Consumption	700 mW max.
Vcc Damage Threshold	15 VDC

0284B