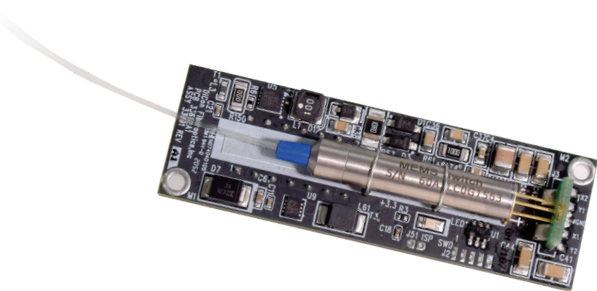# DiCon Fiberoptics, Inc.

# 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.

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

MEMS 1xN OPTICAL SWITCH

Up to 1x8
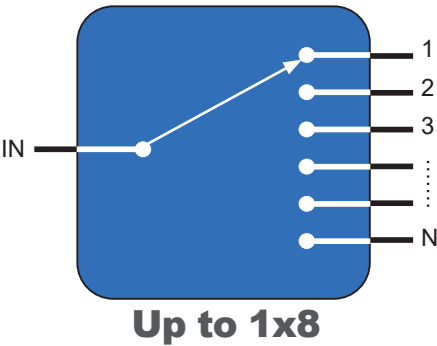
ORDERING INFORMATION

MLC – ☐ – ☐ – ☐ – ☐ – 2B – ☐ – ☐

Switch Configuration

1xN	1xN
	Specify N≤8

Control Interface

I2C	I^{2}C
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 Connectors

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

Other connector types available upon request

Pigtail Length

1	1 Meter
X	Specify X Meters

Tolerance is +/- 0.1 m

PM MEMS 1XN OPTICAL SWITCH
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OPTICAL SPECIFICATIONS[1]

Insertion Loss[2]	Up to 1x2	1.0 dB max.
	Up to 1x4	1.1 dB max.
	Up to 1x8	1.2 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[5]		18 dB min.
Switching Time		30 ms max.
Repeatability[6]		+/- 0.05 dB max.
Durability		10^9 cycles min.
Optical Power		500 mW max.
Fiber Type		Panda Fiber

1. Specifications are without connectors.
2. IL is measured at CWL at room temperature.
3. Power off isolation is same as crosstalk.
4. Wavelength Dependent Loss (WDL) is measured in a +/- 20 nm range.
5. Extinction Ratio ratio with connectors is 15 dB min.
6. Repeatability is defined over 100 cycles.

Dimensions in mm

ELECTRICAL SPECIFICATIONS

Latching Type	non-latching
Control Type	I^2C and TTL
Vcc Voltage	12 VDC
Power Consumption	700 mW max.
Vcc Damage Threshold	15 VDC