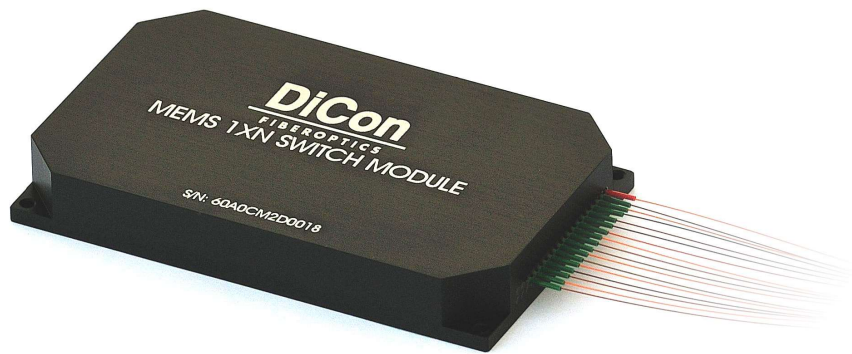


# MEMS VISIBLE 1XN OPTICAL SWITCH

DiCon's MEMS Visible 1xN optical switch allows for the automated connection between one input fiber to anyone of N output fibers. The switch is bidirectional and can also be used in the reverse direction as a Nx1 selector switch. Based on DiCon's industry proven MEMS technology, DiCon uses proprietary techniques to optimize the performance in the visible wavelength region.



## FEATURES

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

## APPLICATIONS

- Biomedical Instrumentation
- Diffuse Optical Tomography
- Source or Target Selector



# MEMS VISIBLE 1XN OPTICAL SWITCH

## OPTICAL SPECIFICATIONS<sup>1,2</sup>

PARAMETER		RATING
Insertion Loss <sup>3,4</sup>	1x2	1.6 dB max.
	1x4 <sup>5</sup>	1.8 dB max.
	1x8 50 $\mu\text{m}$	2.4 dB max.
	1x8 62.5 $\mu\text{m}$	3.4 dB max.
	1x16 <sup>5</sup>	3.6 dB max.
Crosstalk <sup>6</sup>	50 $\mu\text{m}$	-25 dB max.
	62.5 $\mu\text{m}$	-20 dB max.
Back Reflection		-20 dB max.
Switching Time		30 ms max.
TDL		0.40 dB max.
Repeatability <sup>7</sup>		0.04 dB max.
Durability		10 <sup>9</sup> cycles min.
Optical Power		500 mW max.
Operating Temp		-5 to 70°C
Storage Temp		-40 to 85°C
Fiber Type		Multi-mode, Bare Fiber

1. Specifications are without connectors.
2. Aligned for broadband use, with parking state.
3. IL is measured at 632 nm, 23°C.
4. IL is for standard opaque model.
5. Transparent model only for 62.5  $\mu\text{m}$  core fiber.
6. Power off isolation is same as crosstalk.
7. Repeatability is defined after 100 cycles.

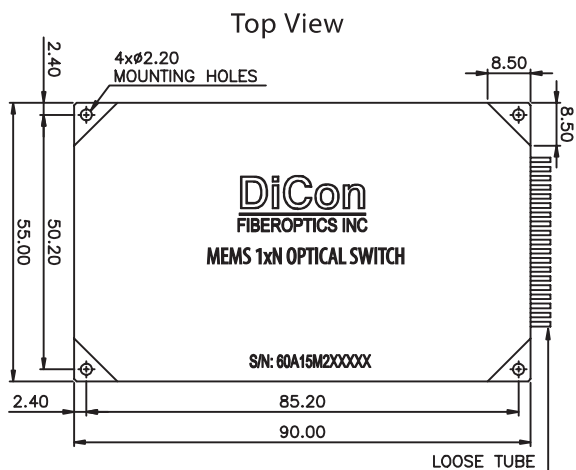
## ORDERING INFORMATION

MS2 -  -  -  -  -  -  -

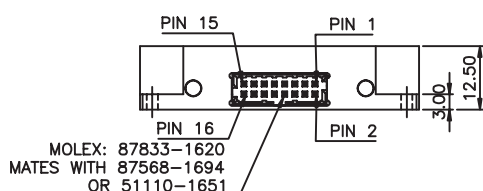
<b>Product Code</b>	
MS2	MEMS Switch
<b>Switch Configuration</b>	
1xN	1xN Switch
<i>Specify N, where N ≤ 16</i>	
<b>Control Interface</b>	
I2C	I <sup>2</sup> C
RS2	RS232
TTL	TTL
<b>Wavelength Range</b>	
6	500 - 800 nm
<b>Fiber and Jacket Type</b>	
50/LT	50 $\mu\text{m}$ core, 900 $\mu\text{m}$ Loose Tube
62/LT	62.5 $\mu\text{m}$ core, 900 $\mu\text{m}$ Loose Tube
<b>Connector Type</b>	
FC	FC/PC
LC	LC/PC
SC	SC/PC
ST	ST/PC
N	NONE
<b>Pigtail Length</b>	
1	1 Meter
X	Specify X Meters
<i>Tolerance is +/- 10 cm</i>	

## MECHANICAL DIMENSIONS

(Units: mm)



Side View



## ELECTRICAL SPECIFICATIONS

PARAMETER		RATING
Latching Type		non-latching
Control Type		I <sup>2</sup> C, RS232 or TTL
Vcc Voltage	I2C, RS232	12 VDC
	TTL	5 VDC
Power Consumption	I2C, RS232	700 mW max.
	TTL	1.5 W max.
Connector Type		Molex 87833-1620