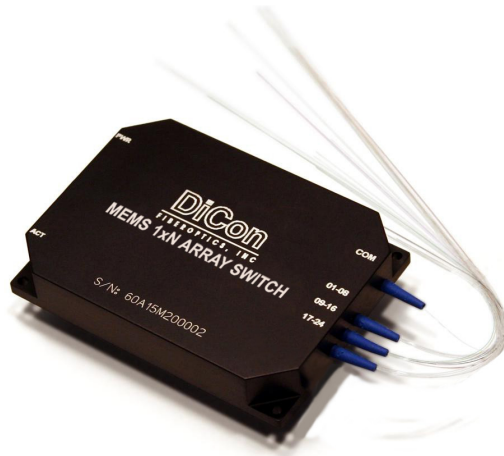


MEMS MULTI-MODE 1xN OPTICAL ARRAY SWITCH

DiCon's MEMS Multi-mode 1xN Optical Array Switch provides channel selection between sets of single input fibers and sets of N output fibers. The module allows up to five MEMS switch components to be co-packaged with the option of switching synchronously. At the core of each switch component 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 in a 2D space. The array switch is bi-directional and can be used as a Nx1 selector switch.



FEATURES

- Proven MEMS Durability and Reliability
- Compact Form Factor
- Fast Switching Time
- Optional Synchronous Switching

APPLICATIONS

- Optical Communications
- Fiber Sensing
- Bio-medical Instrumentation
- Video Distribution



MEMS MULTI-MODE 1xN OPTICAL ARRAY SWITCH

OPTICAL SPECIFICATIONS^{1,2}

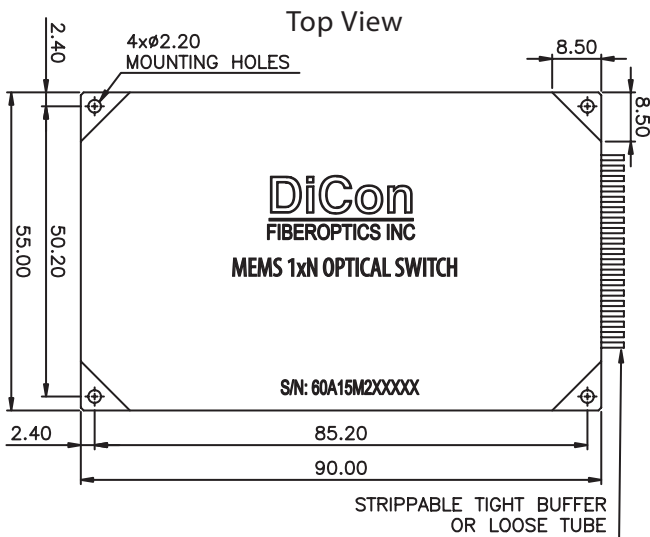
PARAMETER		RATING
Insertion Loss ^{3,4}	$2 \leq N \leq 4$	1.0 dB max.
	$5 \leq N \leq 8$	1.2 dB max.
Crosstalk ⁵	50 μ m	-25 dB max.
	62.5 μ m	-20 dB max.
Back Reflection		-20 dB max.
Switching Time		30 ms max.
TDL		0.40 dB max.
Repeatability ⁶		0.02 dB max.
Durability		10^9 cycles min.
Optical Power		500 mW max.
Operating Temp		-5 to 70°C
Storage Temp		-40 to 85°C
Fiber Type		Multi-mode, Bare Fiber

- Specifications are without connectors.
- Aligned transparent to channel 1.
- IL is measured at specific wavelength, 23°C \pm 5°C.
- IL is for single-band. Dual-band adds 0.3 dB.
- Optical off state isolation is the same as crosstalk.
- Repeatability is defined within 100 cycles.

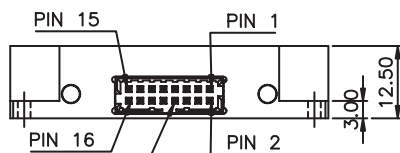
MECHANICAL DIMENSIONS

(Units: mm)

Top View



Side View



MOLEX: 87833-1620
MATES WITH 87568-1694
OR 51110-1651

ORDERING INFORMATION

MS2 - M/1xN - - - - -

Product Code

MS2 MEMS Switch

Switch Configuration

M/1xN M 1xN Array Switch
(Specify M \leq 5, N \leq 8 for 50 μ m or
N \leq 4 for 62.5 μ m; such that
M+M*N \leq 36)

Control Interface

I2C I²C
RS2 RS232
TTL TTL

Wavelength Range

8 850 nm only
9 980 nm only
8/13 850 & 1310 nm

Fiber and Jacket Type

50/BF 50 μ m core, bare fiber
62/BF 62.5 μ m core, bare fiber
50/LT 50 μ m core, loose tube
62/LT 62.5 μ m core, loose tube

Connector Type

FC 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 \pm 10 cm

ELECTRICAL SPECIFICATIONS

PARAMETER		RATING
Latching Type		non-latching
Control Type		I ² C, RS232 or TTL
Vcc Voltage	I ² C, RS232	12 VDC
	TTL	5 VDC
I ² C, RS232 Power Consumption	Start Up	3.6 W max.
	Operating	1.9 W max.
TTL Power Consumption	Start Up	1.5 W max.
	Operating	1.0 W max.
Connector Type		Molex 87833-1620