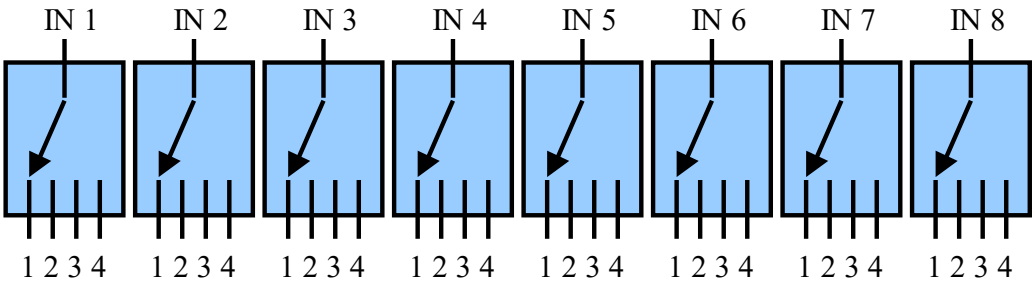
MEMS MULTI-MODE 1XN OPTICAL ARRAY SWITCH

DiCon's MEMS Multi-mode 1xN Optical Array Switch houses and controls up to 16 MEMS 1xN multi-mode optical switches through a single control interface. The switches are bi-directional and can also be used in the reverse direction as an Nx1 selector switch.

DiCon's optical switches operate by collecting and collimating light from the input fiber, and then reflecting this light off of an ultra-stable and reliable, 2-axis DiCon MEMS mirror, which precisely directs the light to the requested output fiber. The input and output fibers aligned to the MEMS mirror using a single ferrule, resulting in an extremely compact, robust design. The MEMS mirror utilizes DiCon's advanced MEMS technology developed over many years at DiCon, and tested and proven in the telecommunications, aero-space and other demanding applications.



FEATURES

- High Reliability
- Proven MEMS Technology
- Lifetime > 1 Billion Switch Cycles
- Controls up to 16 MEMS Optical Switches

APPLICATIONS

- Fiber Sensing
- Resource Sharing
- Test & Measurement

DiCon FIBEROPTICS

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OPTICAL SPECIFICATIONS[1,2]

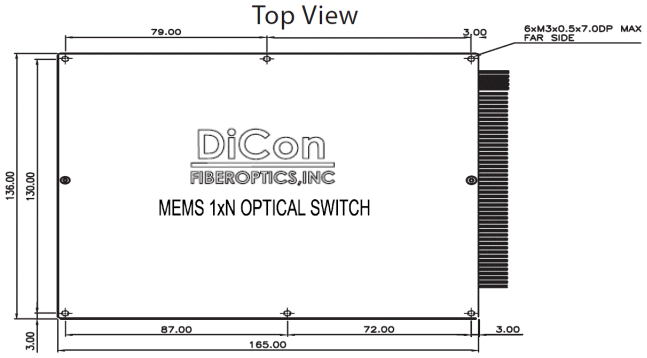
PARAMETER		RATING
Insertion Loss[3,4]	1x2, 1x4	1.0 dB max.
	1x8	1.2 dB max.
Crosstalk[5]	50 um	-25 dB max.
	62.5 um	-20 dB max.
Back Reflection		-20 dB max.
Switching Time		30 ms max.
TDL		0.40 dB max.
Repeatability[6]		0.02 dB max.
Durability		10^9 cycles min.
Optical Power		500 mW max.
Operating Temp		-5 to 70°C
Storage Temp		-40 to 85°C
Fiber Type		Multi-mode

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

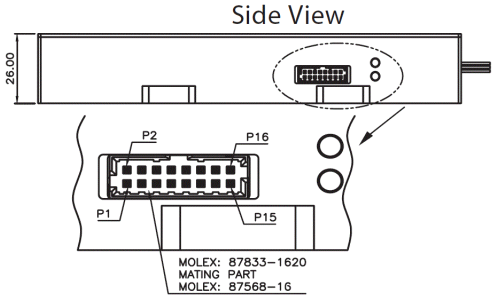
MECHANICAL DIMENSIONS

(Units: mm)

Top View



Side View



ORDERING INFORMATION

MS5 - M/1xN - ☐ - ☐ - ☐ - ☐ - ☐

Product Code

MS5	MEMS Switch

Switch Configuration

M/1xN	M 1xN Array Switch (M≤16 switches N≤8 for 50 um Fiber, N≤4 for 62.5 um Fiber)

Control Interface

I2C	I²C
RS2	RS232

Wavelength Range

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

Fiber and Jacket Type

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

Connector Type

FC	FC/PC
LC	LC/PC
SC	SC/PC
ST	ST/PC
N	NONE

Other connectors avaible upon requet

Pigtail Length

1	1 Meter
X	Specify X Meters

Tolerance is +/- 10 cm

ELECTRICAL SPECIFICATIONS

PARAMETER		RATING
Latching Type		non-latching
Control Type		I²C or RS232
Vcc Voltage		12 VDC
Power Consumption	Start Up	5.0 W max.
	Operating	1.9 W max.
Connector Type		Molex 87833-1620

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