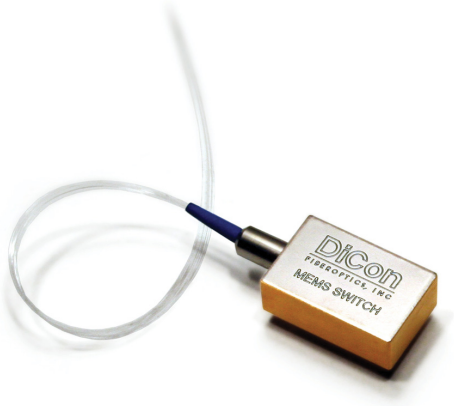
MEMS MULTI-MODE 1X8 OPTICAL SWITCH

DiCon's Multi-Mode MEMS 1x8 Optical Switch provides channel selection betweeen a single input fiber and 8 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 in a 2D plane.



FEATURES

- Proven MEMS Durability and Reliability
- Compact Form Factor
- Fast Switching Time
- TTL Parallel or I^2C Serial Control Interface
- Qualified to GR-1221

APPLICATIONS

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

DiCon
FIBEROPTICS

MEMS MULTI-MODE 1X8 OPTICAL SWITCH

OPTICAL SPECIFICATIONS[1]

PARAMETER	RATING
Insertion Loss[2,3,4]	1.2 dB max.
Crosstalk	-30 dB max.
Back Reflection	-25 dB max.
Switching Time[5]	20 ms max.
TDL	0.2 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

1. Specifications are without connectors.
2. IL is measured at specified wavelength, 23°C.
3. IL is for standard transparent model.
4. IL is for single-band. Dual-band adds 0.3 dB.
5. Power off isolation is same as crosstalk.
6. Repeatability is defined after 100 cycles.

ORDERING INFORMATION

MS1 - 1x8 - ☐ - ☐ - 50/BF - ☐ - ☐

Product Code

MS1 MEMS Switch

Switch Configuration

1x8 1x8 Switch

Control Interface

TTL TTL
I2C I²C

Wavelength Range

8 850 nm only
8/13 850 & 1290 - 1330 nm

Other wavelengths available upon special request

Fiber and Jacket Type

50/BF 50um core, bare fiber

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

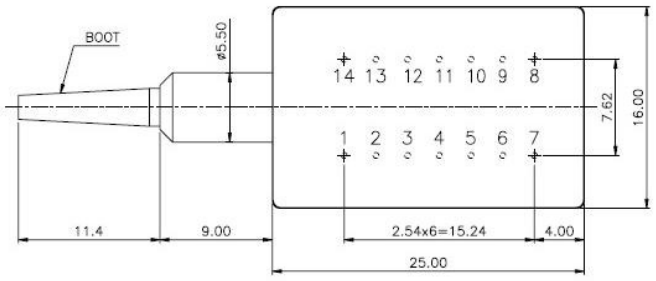
1 1 Meter
X Specify X Meters

Tolerance is +/- 0.05 m

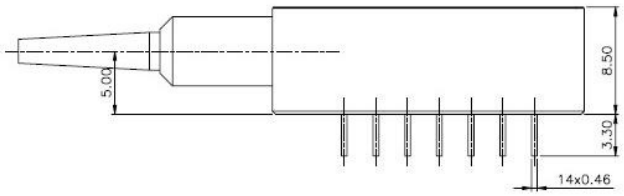
MECHANICAL DIMENSIONS

(Units: mm)

Top View



Side View



ELECTRICAL SPECIFICATIONS

PARAMETER	RATING
Latching Type	non-latching
Control Type	I²C and TTL
Vcc Voltage	12 VDC
Power Consumption	170 mW max.
Vcc Damage Threshold	15 VDC