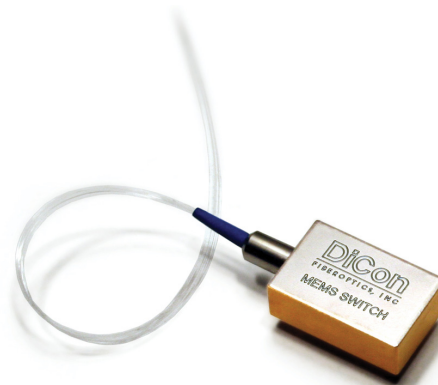


MULTI-MODE MEMS 1X2 SWITCH

DiCon's Multi-Mode (MM) MEMS 1x2 is based on a micro-electro-mechanical system (MEMS) chip. The MEMS chip consists of an electrically moveable mirror on a silicon support. A voltage applied to the MEMS chip causes the mirror to rotate, which changes the coupling of light between a common fiber and two input/output fibers. The MM MEMS 1x2 Switch is a non-latching device, which acts as a shutter when electrical power is removed.



FEATURES

- Small optical switch package
- Based on DiCon's proven MEMS platform
- TTL parallel or SMBus/I²C serial control interface
- Available in both 50µm and 62.5µm core MM fiber

APPLICATIONS

The MM MEMS 1x2 Switch is used in fiber sensing and monitoring, secure communications, and bio-medical and scientific research. Excellent reliability, repeatability and temperature performance makes the MM MEMS 1x2 ideal for temperature and environmental sensing equipment.



MULTI-MODE MEMS 1x2 SWITCH

OPTICAL SPECIFICATIONS¹

PARAMETER		RATING
Insertion Loss ^{2,3}	850 nm	0.8 dB max.
	850/1310 nm	1.2 dB max.
Crosstalk ⁴	50 um core	-30 dB max.
	62.5 um core	-25 dB max.
Back Reflection		-20 dB max.
Switching Time		15 ms max.
TDL		0.20 dB max.
Repeatability ⁵		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 opaque model.
4. Power off isolation is same as crosstalk.
5. Repeatability is defined after 100 cycles.

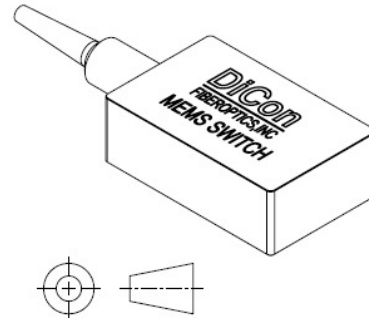
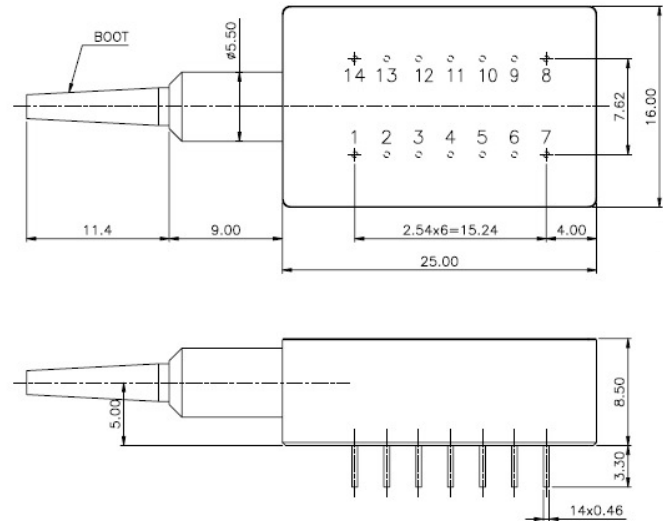
ELECTRICAL SPECIFICATIONS

PARAMETER	RATING
Latching Type	non-latching
Control Type	I ² C and TTL
Vcc Voltage	12 VDC
Power Consumption	170 mW max.
Vcc Damage Threshold	15 VDC

MECHANICAL DIMENSIONS

(Units: mm)

Top View



ORDERING INFORMATION

MS1 - 1x2 - □ - □ - □ - □ - □

Product Code

MS1 MEMS Switch

Switch Configuration

1x2 1x2 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

Pigtail Length

1 1 Meter
X Specify X Meters
Tolerance is +/- 0.05 m

Connector Type

FC/SPC FC/SPC
FC/APC FC/APC
N NONE
Also Available: SC, SC/UPC, SC/APC, ST/UPC, LC

Fiber and Jacket Type

50/BF 50um core, bare fiber
62/BF 62.5um core, bare fiber