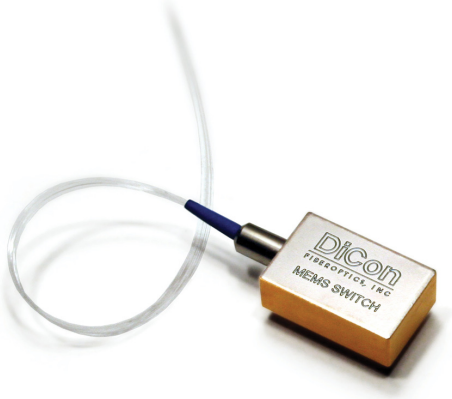
MEMS ADD/DROP 2X2 SWITCH

DiCon's MEMS 2x2 is based on a micro-electromechanical 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 two input fibers and two output fibers.

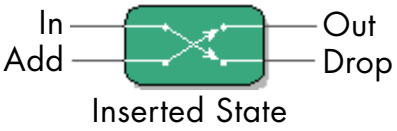


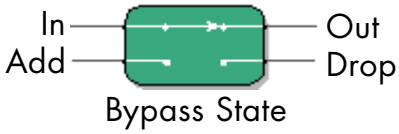
FEATURES

- Small optical switch package
- Based on DiCon's proven MEMS platform
- TTL parallel or SMBus/I^2C serial control interface
- Qualified to Telecordia GR-1221

APPLICATIONS

MEMS Add/Drop 2x2 Switches are two position devices that are commonly used in Optical Add/Drop Multiplexers. In the Bypass state, the Input and Output ports are connected to each other. In the Inserted state, the Input and Drop ports are connected to each other, while at the same time the Add and Output ports are connected to each other.





DiCon
FIBEROPTICS, INC

MEMS ADD/DROP 2X2 SWITCH

OPTICAL SPECIFICATIONS[1]

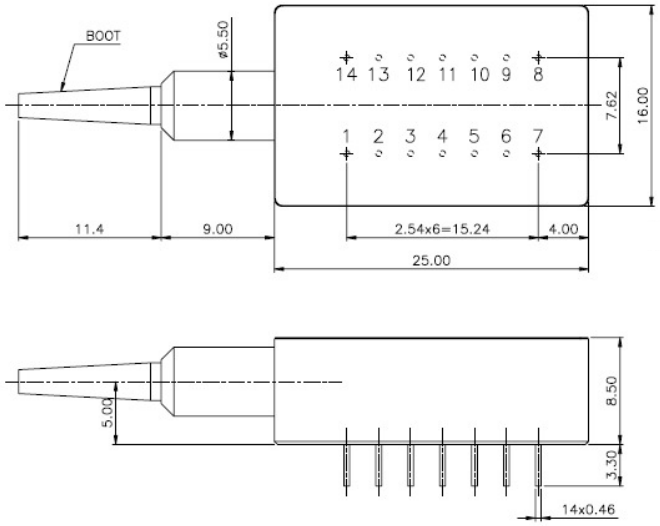
PARAMETER	RATING
Insertion Loss[2]	0.8 dB max.
Crosstalk	-50 dB max.
Back Reflection	-50 dB max.
Switching Time	15 ms max.
TDL	0.30 dB max.
WDL[3]	0.20 dB max.
PDL	0.10 dB max.
Repeatability[4]	0.02 dB max.
Durability	10^9 cycles min.
Optical Power	500 mW max.
Operating Temp	-5 to 70°C
Storage Temp	-40 to 85°C
Fiber Type	9/125 μm single mode

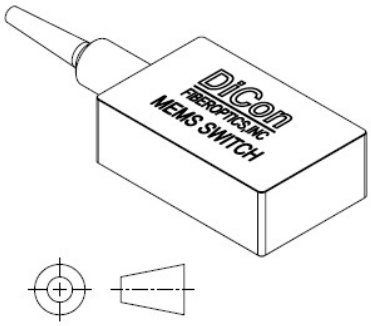
1. Specifications are without connectors.
2. IL is measured at CWL, 23°C.
3. WDL is measured in a +/- 20nm range.
4. Repeatability is defined after 100 cycles.

MECHANICAL DIMENSIONS

(Units: mm)

Top 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

ORDERING INFORMATION

MS1 - 2x2AD - ☐ - ☐ - 9/BF - ☐ - ☐

Product Code
- MS1 — MEMS Switch

Switch Configuration
- 2x2 — 2x2 Add/Drop Switch
  Default state is inserted

Control Interface
- TTL — TTL
- I2C — I²C

Wavelength Range
- 13 — 1290 - 1330 nm
- 15 — 1530 - 1570 nm
- 16 — 1570 - 1610 nm
- 13/15 — 1290 - 1330 & 1530 - 1570 nm
- 15/16 — 1530 - 1570 & 1570 - 1610 nm

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, ST/UPC, LC

Fiber and Jacket Type
- 9/BF — Corning SMF-28, bare fiber
  Or other equivalent 9μm Singlemode fiber

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