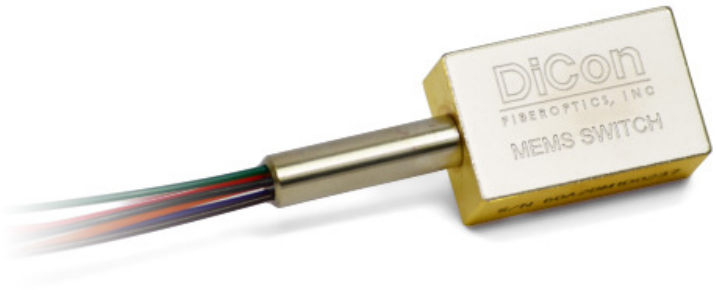
MEMS MULTI-MODE ADD/DROP 2X2 SWITCH

DiCon's MEMS Multi-mode Add/Drop 2x2 Switch 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.

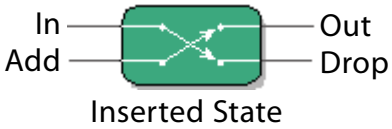


FEATURES

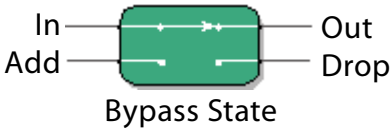
- Small optical switch package
- Based on DiCon's proven MEMS platform
- TTL parallel or SMBus/I^2C serial control interface
- Qualified to Telecordia GR-1221

APPLICATIONS

MEMS Multi-mode 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.



Inserted State



Bypass State

DiCon
FIBEROPTICS, INC

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MEMS MULTI-MODE ADD/DROP 2X2 SWITCH

OPTICAL SPECIFICATIONS[1]

PARAMETER		RATING
Insertion Loss[2]	850 nm	1.0 dB max.
	850/1310 nm	1.3 dB max.
Crosstalk	50 um	-25 dB max.
	62.5 um	-20 dB max.
Back Reflection		-20 dB max.
Switching Time		20 ms max.
TDL		0.30 dB max.
Repeatability[3]		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

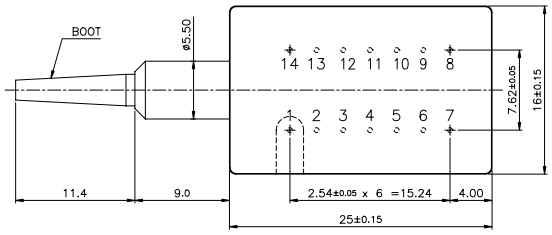
1. Specifications are without connectors.
2. IL is measured at CWL, 23°C.
3. Repeatability is defined after 100 cycles.

ELECTRICAL SPECIFICATIONS

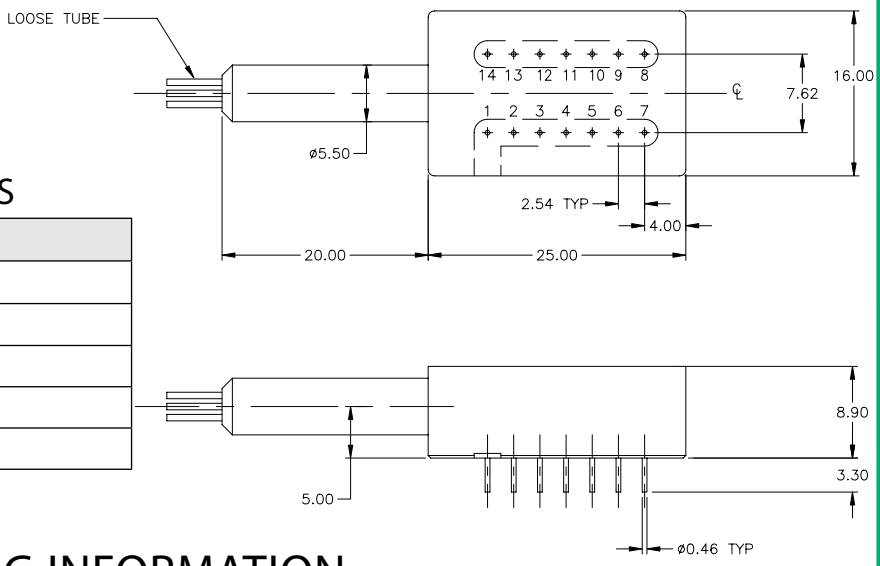
PARAMETER	RATING
Latching Type	non-latching
Control Type	I²C and TTL
Vcc Voltage	12 VDC
Power Consumption	170 mW max.
Vcc Damage Threshold	15 VDC

MECHANICAL DIMENSIONS
(Units: mm)

Bare Fiber



Loose Tube



ORDERING INFORMATION

MS1 - 2x2AD - ☐ - ☐ - ☐ - ☐ - ☐

Product Code
MS1 MEMS Switch

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

Control Interface
TTL TTL
I2C I²C

Wavelength Range
8 850 nm only
8/13 850 nm & 1310 nm

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

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

Fiber and Jacket Type
50/BF 50um core, bare fiber
50/LT 50um core, loose tube
62/BF 62.5um core, bare fiber
62/LT 62.5um core, loose tube

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