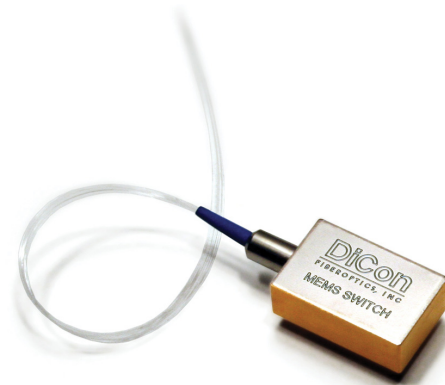


MEMS SINGLE MODE ADD/DROP 2X2 SWITCH

DiCon's MEMS single 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.

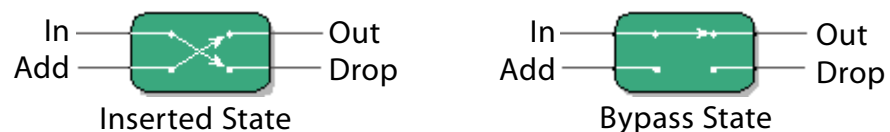


FEATURES

- Small optical switch package
- Based on DiCon's proven MEMS platform
- TTL parallel or SMBus/I²C serial control interface
- Qualified to Telecordia GR-1221

APPLICATIONS

MEMS single 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.



MEMS SINGLE MODE ADD/DROP 2X2 SWITCH

OPTICAL SPECIFICATIONS¹

PARAMETER		RATING
Insertion Loss ²	Single-Band	1.0 dB max.
	Dual-Band	1.2 dB max.
Crosstalk		-50 dB max.
Back Reflection		-50 dB max.
Switching Time		20 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

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

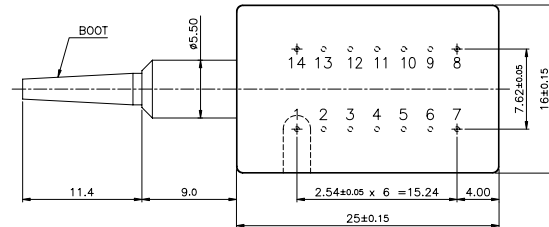
ELECTRICAL SPECIFICATIONS

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

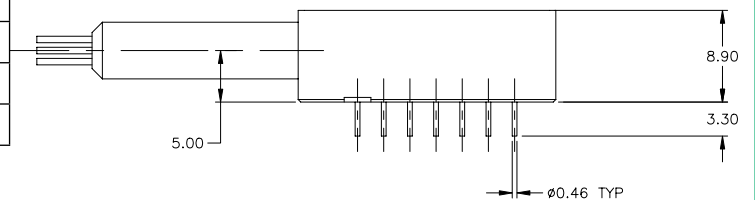
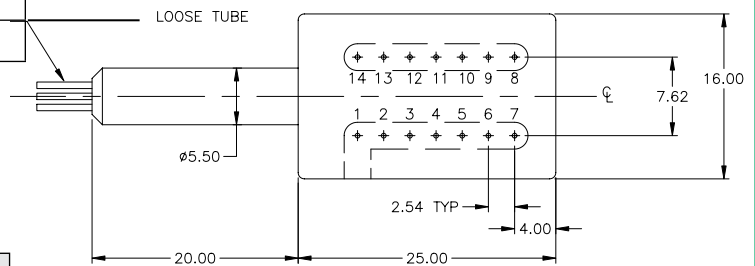
MECHANICAL DIMENSIONS

(Units: mm)

Bare Fiber



Loose Tube



ORDERING INFORMATION

MS1 - 2x2AD - □ - □ - 9/□ - □ - □

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 nm & 1530 - 1570 nm
15/16 1530 - 1570 nm & 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
9/LT Corning SMF-28, loose tube
Or other equivalent 9um Singlemode fiber