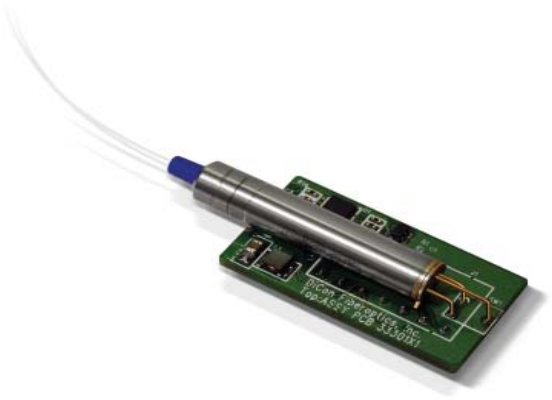
MEMS SINGLEMODE ADD/DROP 2X2 SWITCH

WITH EXTERNAL PCB

DiCon's MEMS Singlemode 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.



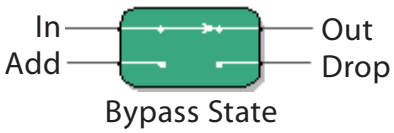
FEATURES

- Proven MEMS Durability and Reliability
- Compact Form Factor
- TTL Parallel or I^2C Serial Control Interface
- Qualified to 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.

Inserted State



Bypass State

DiCon FIBEROPTICS

MEMS SINGLE-MODE ADD/DROP 2X2 SWITCH

WITH EXTERNAL PCB

OPTICAL SPECIFICATIONS[1]

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.
Optical Power		500 mW max.
Durability		10^9 cycles min.
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 at 23°C.
4. Repeatability is defined after 100 cycles.

ORDERING INFORMATION

MSP - 2X2AD - ☐ - ☐ - 9/BF - ☐ - ☐

Product Code

MSP	MEMS Switch with PCB

Switch Configuration

2x2AD	2x2 Add/Drop Switch

Default state is inserted

Control Interface

TTL	TTL
I2C	I^2C

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

Fiber and Jacket Type

9/BF	Corning SMF-28, bare fiber

Or other equivalent 9 μm Singlemode fiber

Connector Type

FC/SPC	FC/SPC
FC/APC	FC/APC
LC/SPC	LC/SPC
LC/APC	LC/APC
SC/SPC	SC/SPC
SC/APC	SC/APC
N	NONE

Other connector types are also available

Pigtail Length

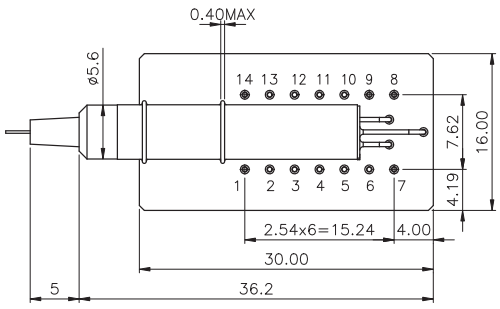
1	1 Meter
X	Specify X Meters

Tolerance is +/- 0.05 m

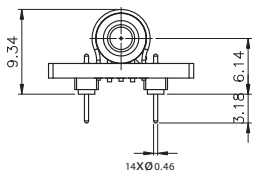
MECHANICAL DIMENSIONS

(Units: mm)

Top View



End View



ELECTRICAL SPECIFICATIONS

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