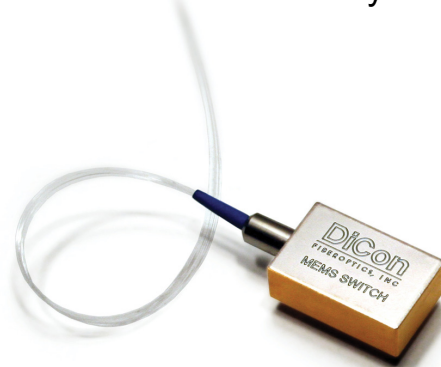


# MEMS 3-CH FLEXPORTR OPTICAL SWITCH

DiCon's MEMS 3-Channel Flexport Switch provides an optical connection between any two of three fibers. At the core of the switch is DiCon's proprietary MEMS chip; an electrostatically driven mirror implemented using single-crystalline silicon and a stiction-free design. The mirror is capable of rotating on two axes, allowing the input light to be redirected back to any desired output in a 2D space.



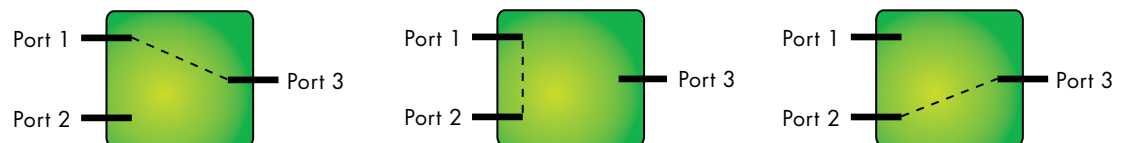
## FEATURES

- Proven MEMS Durability and Reliability
- Compact Form Factor
- Fast Switching Time
- TTL Parallel or I<sup>2</sup>C Serial Control Interface
- Qualified to GR-1221

## APPLICATIONS

- Fiber Sensing
- Bio-medical Instrumentation
- Optical Communications
- Video Distribution

3 Possible Switch States



# MEMS 3-CH FLEXPOROT OPTICAL SWITCH

## OPTICAL SPECIFICATIONS<sup>1</sup>

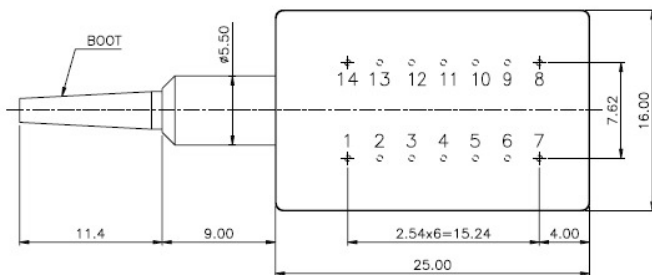
PARAMETER	RATING
Insertion Loss <sup>2,3,4</sup>	0.8 dB max.
Crosstalk <sup>5</sup>	-50 dB max.
Back Reflection	-50 dB max.
Switching Time	30 ms max.
TDL	0.30 dB max.
WDL <sup>6</sup>	0.20 dB max.
PDL	0.10 dB max.
Repeatability <sup>7</sup>	0.02 dB max.
Durability	10 <sup>9</sup> cycles min.
Optical 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.
- IL is for standard opaque model.
- IL is for single-band. Dual-band adds 0.1 dB.
- Power off isolation is same as crosstalk.
- WDL is measured in a +/- 20nm range at 23°C.
- Repeatability is defined after 100 cycles.

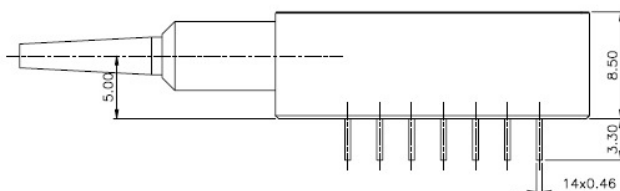
## MECHANICAL DIMENSIONS

(Units: mm)

Top View



Side View



## ORDERING INFORMATION

MS1 - 3F - □ - □ - □ - 9/BF - □

### Product Code

MS1 MEMS Switch

### Switch Configuration

3F 3-Channel Flexport Switch

### Control Interface

TTL TTL  
I<sup>2</sup>C I<sup>2</sup>C

### Wavelength Range

13 1290 - 1330 nm  
15 1530 - 1570 nm  
16 1570 - 1610 nm  
13/15 1290 - 1330 & 1530 - 1570 nm  
15/16 1530 - 1550 & 1570 - 1610 nm

### 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 9 μm Singlemode fiber*

### Pigtail Length

1 1 Meter  
X Specify X Meters  
*Tolerance is +/- 10 cm*

## ELECTRICAL SPECIFICATIONS

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