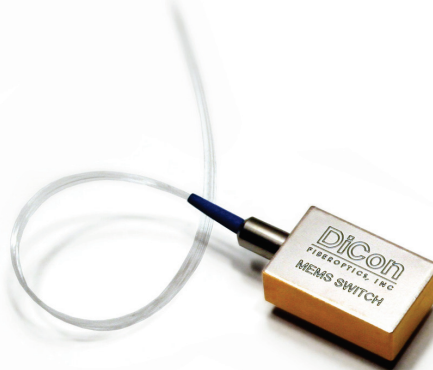


# MEMS 2X2 BLOCKING SWITCH

DiCon's MEMS 2x2 Blocking Switch is based on a micro-electro-mechanical 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.

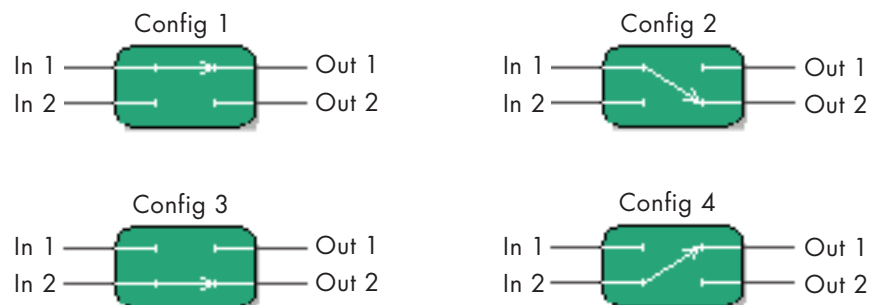


## FEATURES

- Small optical switch package
- Based on DiCon's proven MEMS platform
- TTL parallel or SMBus/I<sup>2</sup>C serial control interface

## APPLICATIONS

The MEMS 2x2 Blocking Switch is often used in telecommunication networks, fiber-based sensing, and bio-medical and scientific research. Excellent reliability, repeatability and temperature performance makes the MEMS 2x2 Blocking switch ideal for a variety of applications.



# MEMS 2X2 BLOCKING SWITCH

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

PARAMETER		RATING
Insertion Loss <sup>2,3</sup>	Single-Band	0.8 dB max.
	Dual-Band	0.9 dB max.
Crosstalk <sup>4</sup>		-50 dB max.
Back Reflection		-50 dB max.
Switching Time		30 ms max.
TDL		0.30 dB max.
WDL <sup>5</sup>		0.20 dB max.
PDL		0.10 dB max.
Repeatability <sup>6</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.
- Power off isolation is same as crosstalk.
- WDL is measured in a +/- 20nm range at 23°C.
- Repeatability is defined after 100 cycles.

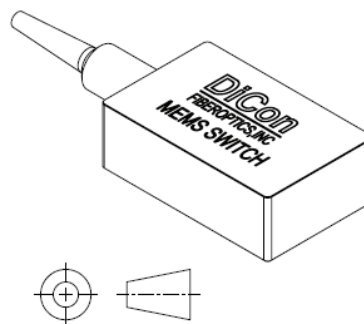
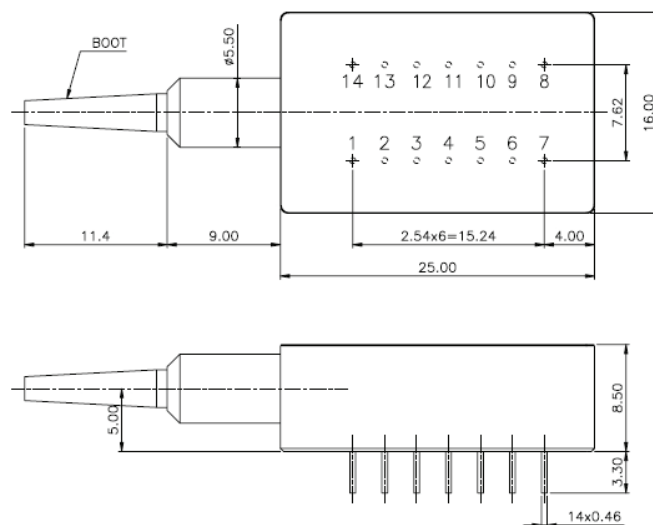
## ELECTRICAL SPECIFICATIONS

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

## MECHANICAL DIMENSIONS

(Units: mm)

Top View



## ORDERING INFORMATION

MS1- 2x2/BK - □ - □ - 9/BF - □ - □

### Product Code

MS1 MEMS Switch

2x2/BK 2x2 Blocking 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 - 1570 & 1570 - 1610 nm

### Pigtail Length

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

### 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*