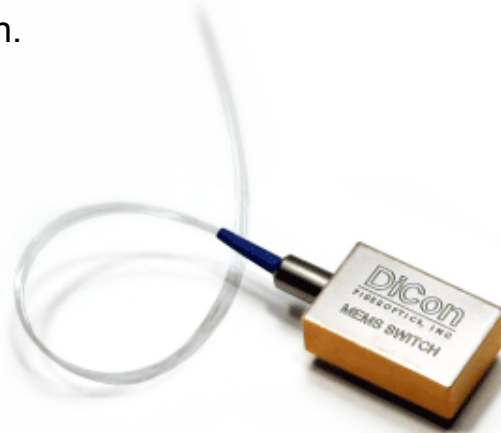


# MEMS VIS/NUV 1X4 OPTICAL SWITCH

DiCon's MEMS 1x4 Switch provides channel selection between a single input fiber and four output 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. The switch is bi-directional and can be used as a 4x1 selector switch.



## 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

- Bio-medical Instrumentation
- Fiber Sensing



# MEMS VIS/NUV 1X4 OPTICAL SWITCH

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

PARAMETER		RATING
Insertion Loss <sup>2,3</sup>	1x2	1.2 dB max.
	1x4 50 μm	1.2 dB max.
	1x4 62.5 μm	1.5 dB max.
Crosstalk <sup>4</sup>		-25 dB max.
Back Reflection		-20 dB max.
Switching Time		20 ms max.
TDL		0.20 dB max.
Repeatability <sup>5</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		Multi-mode, Bare Fiber

- Specifications are without connectors.
- IL is measured at specified wavelength, 23°C.
- IL is for standard transparent model.
- Power off isolation is -15 dB.
- Repeatability is defined after 100 cycles.

## ORDERING INFORMATION

MS1 - □ - □ - □ - □ - □ - □

### Product Code

MS1 MEMS Switch

### Switch Configuration

1xN 1xN Switch  
(Specify N≤4)

### Control Interface

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

### Calibration Wavelength

5 532 nm  
6 632 nm

### Fiber and Jacket Type

50/BF 50 μm core, bare fiber  
62/BF 62.5 μm core, bare fiber

### Connector Type

FC FC/SPC  
FC/APC FC/APC  
N NONE

*Also Available: SC, SC/UPC, SC/APC, ST/UPC, LC*

### Pigtail Length

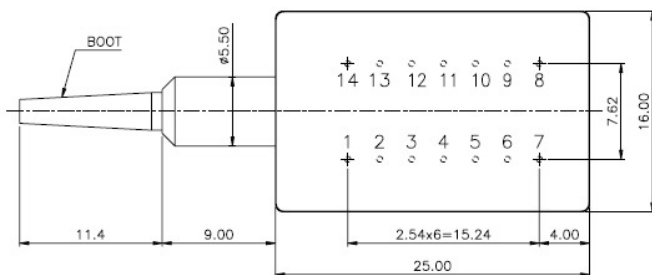
1 1 Meter  
X Specify X Meters

*Tolerance is +/- 10 cm*

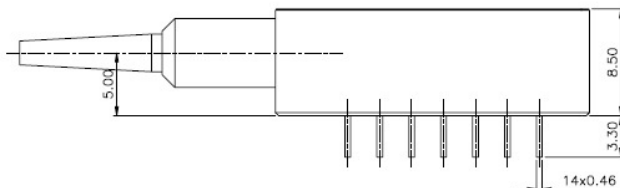
## MECHANICAL DIMENSIONS

(Units: mm)

Top View



Side View



## 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