

# SWITCHES

## MEMS 1x2 SWITCH

DiCon's MEMS 1x2 Switch is based on a micro-electro-mechanical system (MEMS) chip. The MEMS chip consists of an electrically movable mirror on a silicon support. A voltage applied to the MEMS chip causes the mirror to rotate, which changes the coupling of light between a common fiber and two input/output fibers.



### FEATURES

- Smallest 1x2 Switch package in the telecom industry
- Ultra-low current consumption
- Ultra-fast switching time

### APPLICATIONS

MEMS 1x2 Switches are two position devices that enable channel selection. They are commonly used for optical protection switching as well as for reconfigurable optical add/drop multiplexing.



# SWITCHES

## SPECIFICATIONS<sup>1,2</sup>

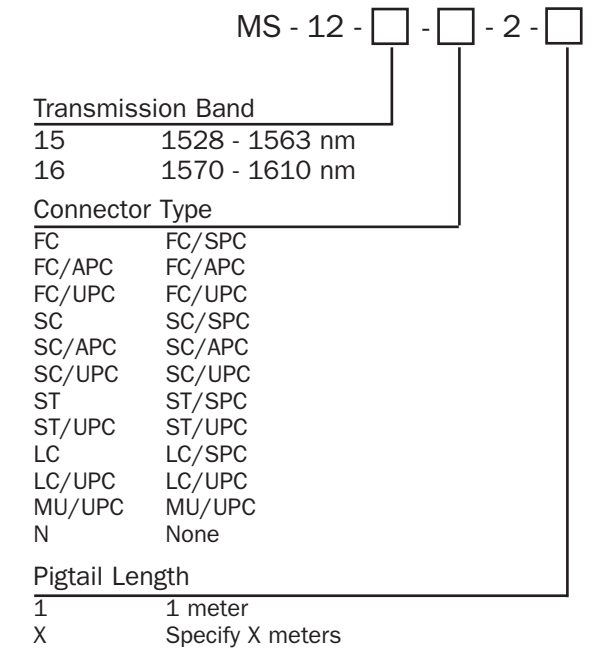
Wavelength range	C Band	1528 - 1563 nm
	L Band	1570 - 1610 nm
Cross talk	-50 dB max.	
Insertion loss	0.8 dB max.	
Temperature dependence <sup>2</sup>	+/- 0.15 dB max.	
Flatness	0.1 dB max.	
PDL	0.1 dB max.	
PMD	0.1 ps max.	
Back-reflection	-55 dB max.	
Optical power	300 mW max.	
Switching time	5 ms max.	
Repeatability	0.1 dB max.	
Wear-out	1 x 10 <sup>7</sup> cycles min.	
Fiber type	9/125 Corning SMF-28	
Fiber jacket	250 micron, 200 kpsi bare fiber	
Operating temperature	0° C to +65° C	
Storage temperature	-40° C to +85° C	

1. All specifications referenced without connectors in C or L band.  
2. Relative to 23° C.

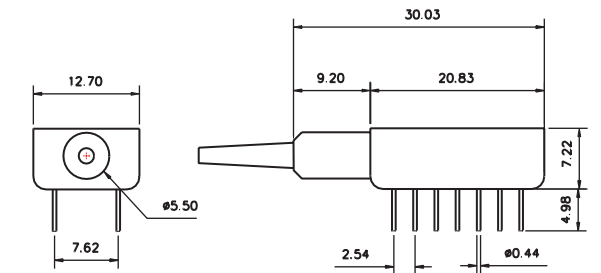
## ELECTRICAL SPECIFICATIONS

Latching type	Non-latching
Vcc voltage	12 - 15 VDC
Vcc power consumption	30 mW max.
Vcc power-up rate	0.5 - 40 V/ms
Vcc damage threshold	18 VDC
CNTRL high voltage level	2.0 - 5.0 VDC
CNTRL low voltage level	0 - 0.4 VDC
CNTRL current	1 mA max

## ORDERING INFORMATION



## HOUSING DIMENSIONS



Units: mm