

# PM MEMS ON-OFF OPTICAL SWITCH

DiCon's PM MEMS On-Off Optical Switch has one input and one output fiber and provides the ability to turn on or off the optical signal passing through it. These fiber optic switches are compact cylindrical devices driven by a direct analog voltage and are intended to be integrated into a larger optical system.



## FEATURES

- Lifetime > 1 Billion Switch Cycles
- Proven MEMS Technology
- Qualified to GR-1221
- High Reliability

## APPLICATIONS

PM MEMS On-Off Optical Switches are useful in secure optical communication applications where it is critical to control the flow of sensitive information, or in test applications where it is desired to simulate the cutting of fiber optic cables.



# PM MEMS ON-OFF OPTICAL SWITCH

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

PARAMETER	RATING
Insertion Loss <sup>2</sup>	0.8 dB max.
TDL	0.30 dB max.
WDL <sup>3</sup>	0.10 dB max.
Extinction Ratio	18 dB min.
Repeatability <sup>4</sup>	0.05 dB max.
Optical Power	500 mW max.
Durability	10 <sup>9</sup> cycles min.
Switching Time	5 ms max.
Operating Temp	-5 to 70°C
Storage Temp	-40 to 85°C
Fiber Type	9/125 μm Panda Fiber

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.

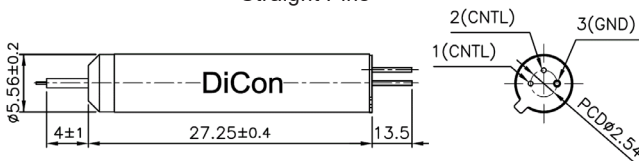
## ELECTRICAL SPECIFICATIONS

PARAMETER	RATING
Latching Type	Non-latching
Off State	Transparent Type 4.5 - 6.5 VDC
Drive Voltage	Opaque Type 0 - 0.2 VDC
Power Consumption	20 μW max.
Vcc Damage Threshold	10 VDC

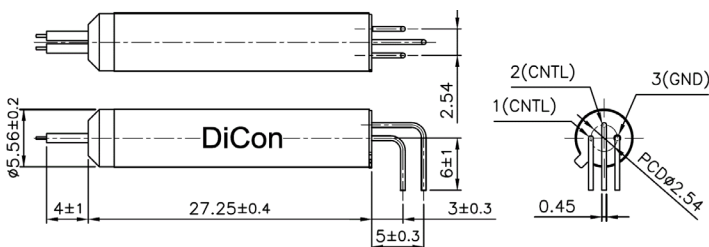
## MECHANICAL DIMENSIONS

(Units: mm)

Straight Pins



Bent Pins



## ORDERING INFORMATION

MS- 10 - C - □ - □ - □ - □ - □ - □ - □ - □

### Housing Type

C Cylindrical

### Switch Type

T Transparent<sup>1</sup>  
O Opaque<sup>2</sup>

### Wavelength Range

13 1290 - 1330 nm  
15 1530 - 1570 nm  
16 1570 - 1610 nm

### Off State Isolation

30 30 dB min.  
35 35 dB min.  
40 40 dB min.  
X Specify X dB min. (X≤40dB)

### Connector Type

PMF Fast axis  
PMS Slow axis  
PMN No Connector

### Fiber and Jacket Type

2B 9/125 μm Panda fiber, 250 μm bare fiber  
4B 9/125 μm Panda fiber, 400 μm buffer  
4/LT 9/125 μm Panda fiber, 900 μm loose tube

### Connector Type

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

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

### Pigtail Length

1 1 Meter  
X Specify X Meters

Tolerance is +/- 0.05 m

### Pin Bendng

S Straight Pins  
B Bent Pins

1. Minimum IL is at 0V. Off state isolation is at 4.5-6.5V.
2. Off state isolation is at 0V. Minimum IL is at 6-7V.