

MEMS MULTIMODE ON-OFF OPTICAL SWITCH

DiCon's MEMS Multimode 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

MEMS Multimode 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.



MEMS MULTIMODE ON-OFF OPTICAL SWITCH

OPTICAL SPECIFICATIONS¹

PARAMETER	RATING	
Insertion Loss ^{2,3}	0.8 dB max.	
Crosstalk	50 μ m	-25 dB max.
	62.5 μ m	-20 dB max.
Back Reflection	-20 dB max.	
TDL	0.30 dB max.	
Repeatability ⁴	0.05 dB max.	
Optical Power	500 mW max.	
Durability	10 ⁹ cycles min.	
Switching Time	10 ms max.	
Operating Temp	-5 to 70°C	
Storage Temp	-40 to 85°C	
Fiber Type	Multi-mode, Bare Fiber	

1. Specifications are without connectors.
2. IL is measured at CWL, 23°C. In 'ON' State.
3. IL is for single-band. Dual-band adds 0.2 dB.
4. Repeatability is defined after 100 cycles.

ORDERING INFORMATION

MS - 10 - C - - - 20 - - - -

Housing Type

C Cylindrical

Switch Type

T Transparent¹
O Opaque²

Wavelength Range

8 850 nm only
9 980 nm only
13 1290 - 1330 nm
8/13 850 nm & 1290-1330 nm

Off State Isolation

20 20 dB min.

Jacket Type

50/BF 50um core, bare fiber
50/LT 50um core, 900um loose tube
62/BF 62.5um core, bare fiber
62/LT 62.5um core, 900um loose tube

Connector Type

FC FC/PC
LC LC/PC
SC SC/PC
ST ST/PC
N NONE

Pigtail Length

1 1 Meter
X Specify X Meters
Tolerance is +/- 0.05 m

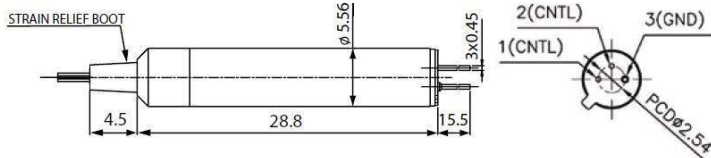
Pin Bending

S Straight Pins
B Bent Pins

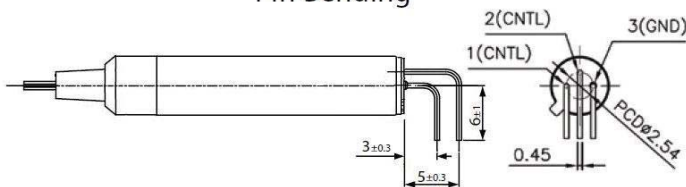
1. Minimum IL is at 0V. Off state isolation is at 25-30V.
2. Off state isolation is at 0V. Minimum IL is at 25-30V.

MECHANICAL DIMENSIONS (Units: mm)

Housing



Pin Bending



ELECTRICAL SPECIFICATIONS

PARAMETER	RATING	
Latching Type	Non-latching	
Off State	Transparent Type	25 - 30 VDC
Drive Voltage	Opaque Type	0 +/- 0.2 VDC
Power Consumption	120 μ W max.	
Vcc Damage Threshold	40 VDC	