MEMS REFLECTION ON/OFF OPTICAL SWITCH

DiCon's MEMS Reflection On/Off Switch provides an optical shutter that can return light through the input fiber. 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 along an axis, allowing the input light to be selectively redirected back to the input fiber.

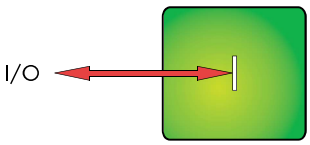
FEATURES

- Proven MEMS Durability and Reliability
- Compact Form Factor
- Fast Switching Time
- Direct Voltage Control
- Qualified to GR-1221

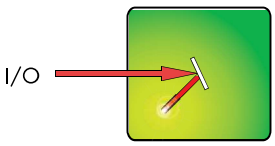
APPLICATIONS

- Fiber Sensing
- Bio-medical Instrumentation
- Optical Communications
- Video Distribution

Reflection On State



Reflection Off State



DiCon FIBEROPTICS

MEMS REFLECTION ON/OFF OPTICAL SWITCH

OPTICAL SPECIFICATIONS[1]

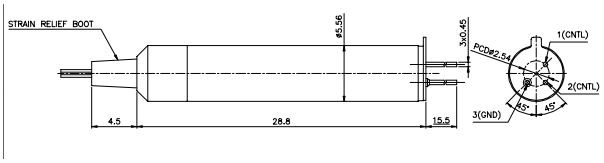
PARAMETER	RATING
Insertion Loss[2,3]	0.7 dB max.
Back Reflection	-45 dB max.
Switching Time	5 ms max.
TDL	0.30 dB max.
WDL[4]	0.20 dB max.
PDL	0.10 dB max.
Repeatability[5]	0.02 dB max.
Durability	10^9 cycles min.
Optical Power	500 mW max.
Operating Temp	-5 to 70°C
Storage Temp	-40 to 85°C
Fiber Type	9/125 μm single mode

1. Specifications are without connectors.
2. IL is measured at CWL, 23°C.
3. IL is for single-band. Dual-band option adds 0.1 dB.
4. WDL is measured in a +/- 20nm range at 23°C.
5. Repeatability is defined after 100 cycles.

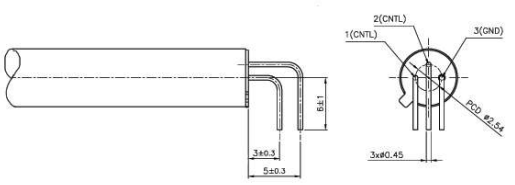
MECHANICAL DIMENSIONS

(Units: mm)

Housing



Pin Bending



ORDERING INFORMATION

MS - REF10 - ☐ - ☐ - ☐ - ☐ - ☐ - ☐

Product Code

MS	MEMS Switch

Switch Configuration

REF10	Reflection On/Off Switch

Switch Type

T	Transparent Switch
O	Opaque Switch

Wavelength Range

13	1290 - 1330 nm
15	1530 - 1570 nm
16	1570 - 1610 nm
13/15	1290 - 1330 & 1530 - 1570 nm
15/16	1530 - 1550 & 1570 - 1610 nm

Off State Isolation

35	35 dB min.
45	45 dB min.
X	Specify X dB min.

Fiber and Jacket Type

9/BF	Corning SMF-28, bare fiber
9/LT	Corning SMF-28, loose tube

Or other equivalent 9 μm Singlemode fiber

Connector Type

FC/SPC	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 +/- 10 cm

ELECTRICAL SPECIFICATIONS

PARAMETER		RATING
Latching Type		Non-latching
Control Type		Direct Voltage
Vcc Voltage	Transparent	0 - 5 VDC
	Opaque[1]	0 - 7 VDC
Power Consumption		20 μW max.

1. Min. IL is between 6 and 7 VDC.