

SWITCHES

MEMS ON-OFF SWITCH

DiCon's MEMS On-Off 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 chip causes the mirror to rotate, which changes the coupling of light between the input and output fibers of the MEMS On-Off Switch.



Cylindrical Package

FEATURES

- Small On-Off Switch package
- Ultra low current consumption
- Available in opaque or transparent versions
- Qualified to GR-1221
- Available in both cylindrical and 14-Pin DIP package

APPLICATIONS

MEMS On-Off Switches are used for distributed power equalization within OADMs, MUX/DMUXes, Band Equalizers, Channel Equalizers, Optical Cross-Connects, Line Cards and Transponders. MEMS On-Off Switches can also be used for gain tilt and input power adjustment in erbium-doped fiber amplifiers.



SWITCHES

OPTICAL SPECIFICATIONS^{1,2}

Insertion loss	0.8 dB max.
Temperature dependence ³	0.3 dB max.
Flatness	0.1 dB max.
PDL	0.1 dB max.
PMD	0.05 ps max.
Back-reflection	-50 dB max.
Optical power	500 mW max.
Switching time	5 ms max.
Repeatability	0.1 dB max.
Wear-out	1 x 10 ⁹ cycles min.
Fiber type	9/125 single mode fiber
Operating temperature	-5° C to +70° C
Storage temperature	-40° C to +85° C

1. All specifications referenced without connectors.

2. Relative to 23° C.

3. Over operating temperature.

ELECTRICAL SPECIFICATIONS

Actuation type		Non-latching
Off State drive voltage	Transparent type	4.5 - 5 VDC
	Opaque type	-0.2 - +0.2 VDC
Voltage damage threshold		10 VDC max.
Resistance		2 MΩ min.
Power consumption		20 uWatt max.

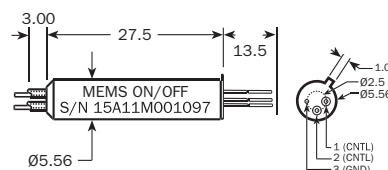
ORDERING INFORMATION

MS - 10 -		-	-	-	-	9 -	-	-	-
Housing Type									
C	Cylindrical								
D	14-Pin DIP								
Switch Type									
T	Transparent ¹								
O	Opaque ²								
Operating wavelength range									
13	1280 - 1330 nm								
15	1528 - 1563 nm								
16	1570 - 1610 nm								
Off State Isolation									
35	35 dB min.								
45	45 dB min.								
X	Specify X dB min.								
Jacket Type									
2B	250 μ barefiber								
9L	900 μ looetube								
Connector Type									
FC	FC/SPC								
FC/APC	FC/APC								
X	Specify connector type ³								
N	None								
Pigtail Length									
1	1 meter								
X	Specify X meters								

1. Minimum insertion loss @ 0V
2. Minimum insertion loss @ 5V
3. Connector Types: FC/UPC, SC, SC/APC, SC/UPC, LC, LC/UPC, MU/UPC

HOUSING DIMENSIONS

Cylindrical Package



14-pin DIP Package

