SMITCHES

MEMS ON-OFF SWITCH

DiCon's MEMS On-Off Switch is based on a micro-electromechanical 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.



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.



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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 V			
Voltage damage threshold		10 VDC max.		
Resistance		$2 M\Omega$ min.		
Power consumption		20 uWatt max.		

ORDERING INFORMATION

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

- 1 meter
- 1 X Specify X meters
- 1. Minimum insertion loss @ OV
- 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



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