MEMS MULTI-MODE 1XN OPTICAL SWITCH

CYLINDRICAL PACKAGE

DiCon's MEMS Multi-mode 1xN Switch provides channel selection between a single input fiber and N output fibers. 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 on two axes, allowing the input light to be redirected back to any desired output in 2D space. The switch is bi-directional and can be used as a Nx1 selector switch.

FEATURES

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

APPLICATIONS

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

DiCon FIBEROPTICS

MEMS MULTI-MODE 1XN OPTICAL SWITCH

OPTICAL SPECIFICATIONS[1,2]

PARAMETER		RATING
Insertion Loss[3,4]	1x2,1x4	1.0 dB max.
	1x6, 1x8	1.2 dB max.
Crosstalk[5]	50 um	-25 dB max.
	62.5 um	-20 dB max.
Back Reflection		-20 dB max.
TDL		0.30 dB max.
Repeatability[6]		0.02 dB max.
Optical Power		500 mW max.
Durability		10^9 cycles min.
Switching Time[7]	1x2, 1x4	20 ms max.
	1x6,1x8	30 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. Aligned transparent to channel 1.
3. IL is measured at specified wavelength, 23°C ± 5°C.
4. IL is for single-band. Dual-band adds 0.3dB.
5. Optical off state isolation is the same as crosstalk.
6. Repeatability is defined within 100 cycles.
7. When using optimized voltage ramp.

ORDERING INFORMATION

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Product Code
MSB Cylindrical MEMS Switch

Switch Configuration
1xN 1XN
Specify N≤8 for 50um or N≤4 for 62.5um

Control Interface
0 Direct Voltage

Wavelength Range
8 850 nm only
9 980 nm only
8/13 850 & 1310 nm

Fiber and Jacket Type
50/BF 50um core, bare fiber
62/BF 62.5um core, bare fiber

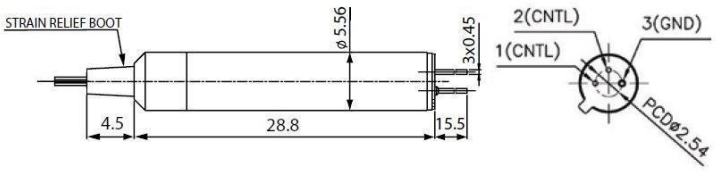
Connector Type
FC FC/PC
LC LC/PC
SC SC/PC
ST ST/PC
N NONE

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

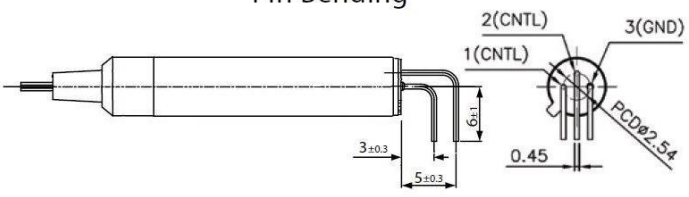
Pin Bendng
S Straight Pins
B Bent Pins

MECHANICAL DIMENSIONS
(Units: mm)

Housing



Pin Bending



ELECTRICAL SPECIFICATIONS

PARAMETER	RATING
Latching Type	non-latching
Control Type	Direct Voltage[1]
Vcc Voltage	0-30 VDC
Power Consumption	120 µW max.
Vcc Damage Threshold	40 VDC

1. Tolerance is +/- 10 mV to meet optical specifications.