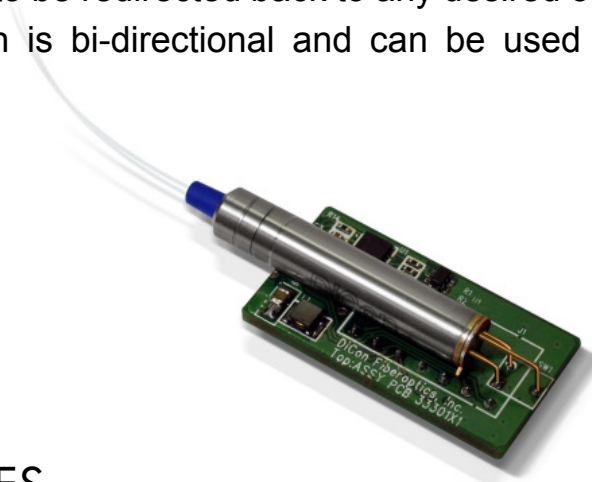


MEMS 1xN OPTICAL SWITCH

WITH EXTERNAL PCB

DiCon's MEMS 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 a 2D plane. The switch is bi-directional and can be used as a Nx1 selector switch.



FEATURES

- Drop-in Replacement for DIP Option
- Proven MEMS Durability and Reliability
- Compact Form Factor
- Fast Switching Time
- TTL Parallel or I²C Serial Control Interface
- Qualified to GR-1221

APPLICATIONS

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



MEMS 1XN OPTICAL SWITCH

OPTICAL SPECIFICATIONS¹

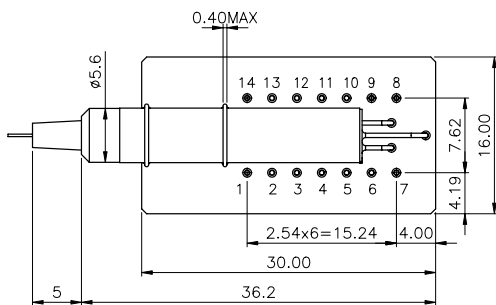
PARAMETER		RATING
Insertion Loss ^{2,3,4}	1x2, 1x4	0.7 dB max.
	1x8	0.8 dB max.
	1x12	1.2 dB max.
Crosstalk ⁵		-50 dB max.
Back Reflection		-50 dB max.
TDL		0.30 dB max.
WDL ⁶	1x2, 1x4, 1x8	0.20 dB max.
	1x12	0.30 dB max.
PDL		0.10 dB max.
Repeatability ⁷		0.02 dB max.
Optical Power		500 mW max.
Durability		10 ⁹ cycles min.
Switching Time	1x2	10 ms max.
	1x4, 1x8	20 ms max.
	1x12	30 ms max.
Operating Temp		-5 to 70°C
Storage Temp		-40 to 85°C
Fiber Type		9/125 μm single mode

- Specifications are without connectors.
- IL is measured at CWL, 23°C.
- IL is for standard opaque model.
- IL is for single-band. Dual-band adds 0.1dB.
- Power off isolation is same as crosstalk.
- WDL is measured in a +/- 20nm range at 23°C.
- Repeatability is defined after 100 cycles.

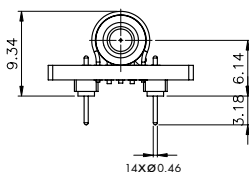
MECHANICAL DIMENSIONS

(Units: mm)

Top View



End View



ORDERING INFORMATION

MSP - - - - 9/BF - -

Product Code

MSP MEMS Switch with PCB

Switch Configuration

1x2 1x2 Switch
1x4 1x4 Switch
1x8 1x8 Switch
1x12 1x12 Switch

Control Interface

TTL TTL
I²C I²C

Wavelength Range

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

Fiber and Jacket Type

9/BF Corning SMF-28, bare fiber
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 +/- 0.05 m

ELECTRICAL SPECIFICATIONS

PARAMETER	RATING
Latching Type	non-latching
Control Type	I ² C and TTL
Vcc Voltage	12 VDC
Power Consumption	170 mW max.
Vcc Damage Threshold	15 VDC