

MEMS MULTI-MODE 1X64 OPTICAL SWITCH

DiCon's Multi-Mode MEMS 1xN Optical Switch provides channel selection between a single input fiber and N output fibers. The 1xN module allows multiple MEMS multi-mode switch components to be configured to provide a compact switch with up to 64 channels. At the core of each switch component 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 re-directed back to any desired output in a 2D plane. 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

APPLICATIONS

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



MEMS MULTI-MODE 1X64 OPTICAL SWITCH

OPTICAL SPECIFICATIONS¹

PARAMETER		RATING
Insertion Loss ^{2,3,4}		2.4 dB max.
Crosstalk ⁵	50 μm	-25 dB max.
	62.5 μm	-20 dB max.
Back Reflection		-20 dB max.
Switching Time		40 ms max.
TDL		0.4 dB max.
Repeatability ⁶		0.04 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		Multi-mode

- Specifications are without connectors.
- IL is measured at specified wavelength, 23°C.
- IL is for standard transparent model.
- IL is for single-band. Dual-band adds 0.9 dB.
- Power off isolation is same as crosstalk.
- Repeatability is defined after 100 cycles.

ORDERING INFORMATION

MSR - □ - □ - □ - □ - □ - □ - B - □

Product Code

MSR MEMS Switch

Switch Configuration

1xN 1xN, Specify N≤64

Housing Type

1U 1U Rackmount
2U 2U Rackmount

Control Interface

I2C I²C
RS2 RS232

Wavelength Range

8 850 nm only
8/13 850 & 1290 - 1330 nm
Other wavelengths available upon special request

Fiber Type

50 50μm core
62 62.5μm core

Connector Type

FC/SPC FC/SPC
FC/APC FC/APC
MTP MTP
Also Available: SC, SC/UPC, SC/APC, ST, ST/UPC, LC

Port Type

B Bulkhead Adaptors

Port Location

F Front Panel
R Rear Panel

CONNECTOR & CHASSIS OPTIONS¹

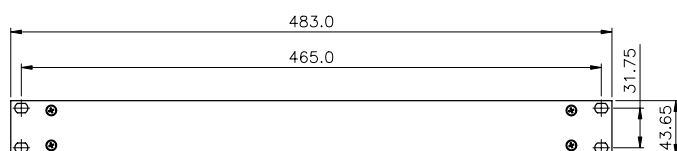
CONNECTOR QUANTITY		CHASSIS SIZE
FRONT	REAR	
48	34	1U
64	54	2U

- Based on FC connectors.

MECHANICAL DIMENSIONS

(Units: mm)

1U 19" RACKMOUNT CHASSIS



ELECTRICAL SPECIFICATIONS

PARAMETER	RATING
Latching Type	non-latching
Control Type	I ² C, RS232
Vcc Voltage	100 - 240 VAC
Connector Type	9 pin D-Sub Female