

MEMS MODULAR MULTIMODE MATRIX OPTICAL SWITCH

DiCon's MEMS Modular Multimode Matrix Optical Switch is based on DiCon's industry proven, long-life, reliable MEMS 1xN optical switch components. Every input has a 1xN fiber optic switch, while every output has a Nx1 fiber optic switch. The output fibers of each 1xN are spliced to the N side of each Nx1 to allow any input to connect to any output, in a fully non-blocking optical cross-connect manner.



FEATURES

- High Reliability
- Proven MEMS Technology
- Lifetime > 1 Billion Switch Cycles
- Available with 50 μm or 62.5 μm Multimode Fiber

APPLICATIONS

When combined with other fiber optic components, matrix optical switches are useful to add redundancy to an optical network. They are also useful to share resources in test & measurement applications.



MEMS MODULAR MULTIMODE MATRIX OPTICAL SWITCH

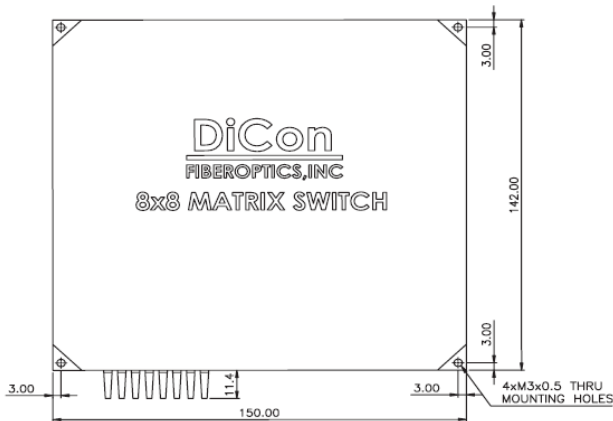
OPTICAL SPECIFICATIONS¹

PARAMETER		RATING
Insertion Loss ^{2,3}	4x4	2.0 dB max.
	8x8	2.4 dB max.
Crosstalk	50 μ m	-25 dB max.
	62.5 μ m	-20 dB max.
Back Reflection		-20 dB max.
Switching Time		30 ms max.
TDL		0.4 dB max.
Repeatability ⁴		0.04 dB max.
Durability		10 ⁹ cycles min.
Optical Power		500 mW max.
Operating Temperature		-5 to 70°C
Storage Temperature		-40 to 85°C
Fiber Type		Multimode, Bare Fiber

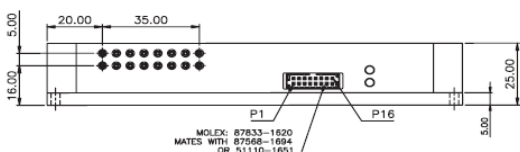
- Specifications are without connectors.
- IL is measured at specified wavelength, 23°C.
- IL is for single-band. Dual-band add 0.4 dB.
- Repeatability is defined after 100 cycles.

MECHANICAL DIMENSIONS (Units: mm)

Top View



Front View



ORDERING INFORMATION

MX3 - - - - - -

Product Code

MX3 MEMS Matrix

Switch Configuration

MxN MxN Non-Blocking
(Specify M,N \leq 8 for 50 μ m
and M,N \leq 4 for 62.5 μ m)

Control Interface

I2C I²C
RS2 RS232

Wavelength Range

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

Other wavelengths available upon special request

Fiber and Jacket Type

50/BF 50 μ m core, bare fiber
62/BF 62.5 μ m core, bare fiber
50/LT 50 μ m core, loose tube
62/LT 62.5 μ m core, loose tube

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 or RS232
Vcc Voltage	12 VDC
Power Consumption	700 mW max.
Connector Type	Molex 87833-1620