S W I T C H E S

MEMS 24x24 MATRIX SWITCH

DiCon's 24x24 MEMS Matrix Switch is an integrated switch module based on DiCon's MEMS 1x24 Switch. Forty-eight MEMS 1x24 Switches, twenty-four for inputs and the other twenty-four for outputs, are interconnected to form a fully non-blocking, two stage, fan-out/fan-in Spanke Configuration. Under this matrix switch platform, different MEMS 1xN Switches can be used to form customized NxM Switch

FEATURES

- Small form factor (less than 8"x 11"x 1")
- Low insertion loss (< 1.7 dB)
- Low cross talk (<-55 dB)
- Fast switching time (< 35 ms)
- Excellent repeatability (<+/- 0.02 dB)
- Low power consumption (< 500 mW)
- MEMS durability and reliability (>10^9 Cycles)
- Available in other customized configurations

APPLICATIONS

The MEMS 24x24 Matrix is used in an optical network to dynamically configure the system. Mounting to any network card is easily achieved with its small form factor and 1" thickness. For Test and Measurement applications, the matrix switch is a simplified alternative solution for cable management and allows users to share resources.

DiCon
FIBEROPTICS, INC

S W I T C H E S

SPECIFICATIONS

Insertion Loss[1,2]	1.7 dB max.
Crosstalk	-55 dB max.
Back Reflection	-50 dB max.
Switching Time	35 ms max.
TDL	0.3 dB max.
WDL[3]	0.3 dB max.
PDL	0.05 dB max.
Repeatability[4]	+/- 0.02 dB max.
Stability[5]	+/- 0.02 dB max.
Durability	10^9 cycles min.
Optical Power	500 mW max.
Operating Temperature	0 ^{o}C to 70 ^{o}C
Storage Temperature	-40°C to +85°C
Fiber Type	9/125 μm Singlemode

1. IL is measured at 1550nm, 23°C.
2. IL is for opaque model. Power off isolation is same as cross talk.
3. WDL is specified in a +/- 20nm range.
4. Repeatability is defined after 100 cycles.
5. Over 8 hour period, 23°C

HOUSING DIMENSIONS

Units: mm

ORDERING INFORMATION

MX-24x24-☐-☐-☐-☐-☐

Product Code

MX   MEMS Matrix

Switch Configuration

24x24   24x24 Non-Blocking

Control Interface

I2C   I^{2}C
RS2   RS232
RS4   RS485

Wavelength Range

13   1290 - 1330 nm
15   1525 - 1565 nm
16   1570 - 1610 nm
13/15   1290 - 1330 & 1525 - 1565 nm

Fiber and Fiber Jacket Type

9/TB   SMF-28 with Tight Buffer jacket[1]
9/LT   SMF-28 with Loose Tube jacket[1]

Connector Type

FC   FC Connector
FC/A   FC/APC Connector

Pigtail Length

1   1 meter long standard pigtail
X   Specified length

1. Or other equivalent 9μm Singlemode fiber
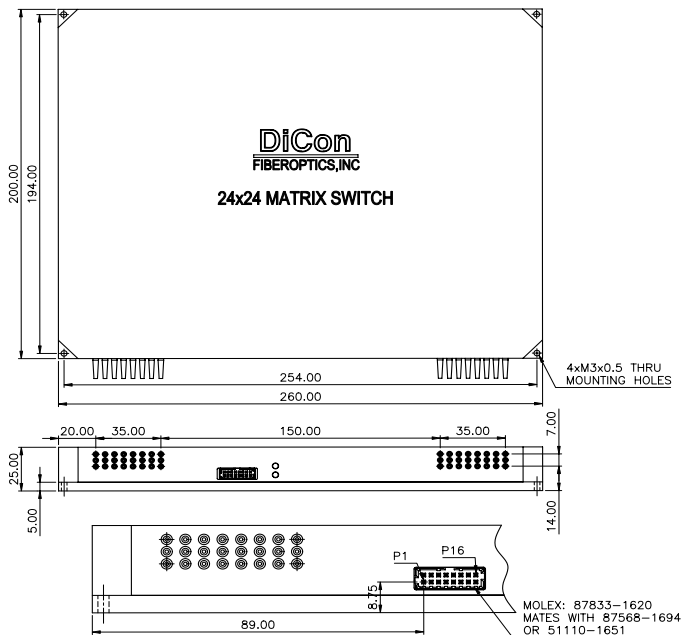
ELECTRICAL SPECIFICATIONS

Latching Type	Non-latching
Control Type	I^{2}C, RS232, or RS485
Connector Type	Molex 87833-1620
Supply Voltage	DC 12 V
Power Consumption	500mW max.

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