

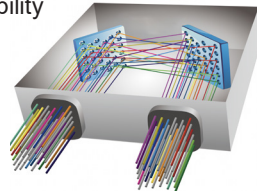
MEMS 144X144 OPTICAL MATRIX SWITCH MODULE

SX4 Model, PM Fiber, Performance Grade



MEMS Optical Matrix Switch Module is built with DiCon's proprietary MEMS technology. Each module contains 2 sets of MEMS mirrors for making 1-to-1 connections between input and output ports. The MEMS mirrors are held in position using precisely calibrated voltages and require no feedback control. This unique quality enables the switch to maintain stable connections and allows the device to function when there is no light in the fiber. This innovative platform has an outstanding track record and delivers best-in-class optical performance

- Proven MEMS technology
- Lifetime > 10⁹ switch cycles
- No dithering or active alignment artifacts
- Switches and holds dark fiber connections
- Low insertion loss with excellent stability
- Compact and lightweight
- Asymmetric MxN available



About DiCon

- Headquartered in California since 1986
- US based in-house MEMS fab
- Over 3 million MEMS mirrors produced since 1999
- Manufactures TAA compliant products

ORDERING INFORMATION

SX4 - P□ - □ - □ - □ - □ - □ - □ - □

Grade

P Performance

Switch Configuration

144x144 144x144

MxN M≤144, N≤144

Fiber Type

PM13 Corning PM 1300 Fiber

PM15 Corning PM 1550 Fiber

**Other fiber options available upon request*

Test Wavelength

O 1310 nm

E 1410 nm

S 1495 nm

C 1550 nm

L 1590 nm

U 1650 nm

**Use "/" to add multiple wavelengths. E.g., O/C or O/C/L*

Fiber Jacket

L 900 μm Loose Tube Fiber

B 250 μm Bare Fiber

**Other fiber options available upon request*

Connector Type

N None

FC FC/UPC

FC/APC FC/APC

**Other connector types available upon request*

Connector Key Orientation

N None

S Slow Axis

F Fast Axis

Pigtail Length

1 1 Meter

X Specify X Meters

**Tolerance is +/- 0.1 m*

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OPTICAL SPECIFICATIONS¹

| | |
|--|--------------------|
| Operating Wavelength | 1260 to 1675 nm |
| Insertion Loss ² | < 1.0 dB |
| Loss Repeatability ³ | +/- 0.01 dB |
| Connection Stability ⁴ | +/- 0.01 dB |
| Connection Stability (Short Term) ⁵ | +/- 0.005 dB |
| Polarization Extinction Ratio (PER) ⁶ | > 18 dB |
| WDL ⁷ | < 0.3 dB |
| Crosstalk | < -70 dB |
| Back Reflection | < -50 dB |
| Optical Transition Time ⁸ | < 25 ms |
| Switch Lifetime | > 1 Billion Cycles |
| Input Power Range | Dark to +27 dBm |

1. Measured separately for each Test Wavelength at 23°C
2. Measured with 3-jumper method or equivalent. See TIA/EIA 526-7
3. Over 100 cycles
4. 1 Hz sampling rate for 15 min
5. 10 KHz sampling rate for 10 Sec
6. PER with connectors is 18 dB typical, 16 dB minimum
7. Test Wavelength +/-20nm
8. Optical transition time for all ports switching concurrently, not including command processing overhead

ELECTRICAL SPECIFICATIONS

| | |
|--------------------------|---|
| Module Power Consumption | 23 W max. Operating 36 W max. Start Up |
| Supply Voltage | 12V DC |
| Module Interface | 16-Pin Samtec |
| Module Control | USB, RS232, I ² C |

ENVIRONMENTAL SPECIFICATIONS

| | |
|-----------------------|-----------------------|
| Operating Temperature | 0 to 50°C, < 85% RH |
| Storage Temperature | -40 to 70°C, < 40% RH |

MECHANICAL SPECIFICATIONS

| | |
|-----------------------------|--------------------------|
| Module Size | 292 mm x 273 mm x 126 mm |
| Module Weight (with fibers) | 8.65 kg |

Dimensions in mm

