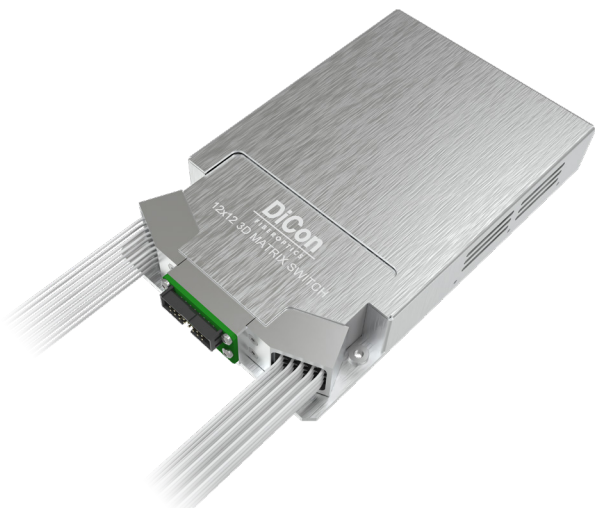


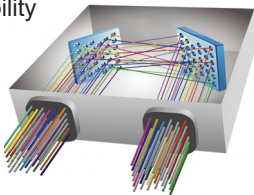
MEMS 12X12 OPTICAL MATRIX SWITCH MODULE

SX1 Model, Polarization Maintaining Fiber, Standard 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

SX1 - T - - - - -

Grade	
T	Standard
Switch Configuration	
12x12	12x12
MxN	M≤12, N≤12
Fiber Type	
PM13	Corning PM 1310 Fiber
PM15	Corning PM 1550 Fiber
*Other fiber options available upon request	
Test Wavelength	
O	1310 nm
C	1550 nm
L	1590 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	+/- 0.03 dB
Connection Stability ^{4,5}	+/- 0.03 dB
Polarization Extinction Ratio (PER) ⁶	> 18 dB
WDL ^{5,7}	< 0.3 dB
Crosstalk ⁵	< -60 dB
Back Reflection	< -50 dB
Optical Transition Time ^{5,8}	< 25 ms
Switch Lifetime	> 1 Billion Cycles
Input Power Range	Dark to +27 dBm

1. Measured separately for each Test Wavelength at room temperature
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. Met by design, not measured
6. PER with connectors is 18 dB typical, 16 dB minimum
7. WDL is defined within Test Wavelength ± 20 nm
8. Optical transition time for all ports switching concurrently, not including command processing overhead

ELECTRICAL SPECIFICATIONS

Module Power Consumption	3.8 W max. Operating 6.5 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	142 mm x 88 mm x 22.2 mm
Module Weight (with fibers)	0.42 kg

