MEMS 16X16 OPTICAL MATRIX SWITCH MODULE

MX1 Model, Multimode 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

Grade		
Т	Standard	
Switch	Configuration	
16x16 MxN	16x16 M≤16, N≤16	
Fiber T	уре	
62 *Other fik	62.5 μm ber options available upon request	
Test Wa	avelength	
850	850 nm	
O C 850/O O/C *Other wa	1310 nm 1550 nm 850/1310 nm 1310/1550 nm avelength options are available upon request	
C 850/O O/C	1550 nm 850/1310 nm 1310/1550 nm avelength options are available upon request	
C 850/O O/C *Other wa	1550 nm 850/1310 nm 1310/1550 nm avelength options are available upon request	
C 850/O O/C *Other wa Fiber Ja T *Other fil	1550 nm 850/1310 nm 1310/1550 nm avelength options are available upon request acket 900 μm Tight Buffer per options available upon request	
C 850/O O/C *Other wa *Other file Connec N FC FC/APC LC LC/APC SC SC/APC	1550 nm 850/1310 nm 1310/1550 nm avelength options are available upon request acket 900 μm Tight Buffer	
C 850/O O/C *Other wa Fiber J: T *Other file Connec N FC FC/APC LC LC LC/APC SC SC/APC *Other cc	1550 nm 850/1310 nm 1310/1550 nm avelength options are available upon request acket 900 μm Tight Buffer per options available upon request ctor Type None FC/UPC FC/APC LC/UPC LC/UPC LC/APC SC/UPC SC/UPC SC/APC	

Pigtail Length

1 1 Meter X Specify X Meters *Tolerance is +/- 0.05 m



MEMS 16X16 OPTICAL MATRIX SWITCH MODULE

MX1 Model, Multimode Fiber, Standard Grade

OPTICAL SPECIFICATIONS^{1,2,3}

Operating Wavelength	850 / 1310 / 1550 nm
Insertion Loss	< 1.6 dB
Loss Repeatability ⁴	+/- 0.03 dB
Connection Stability ^{5,6}	+/- 0.03 dB
Crosstalk ⁶	< -60 dB
Back Reflection	TBD
Optical Transition Time ^{6,7}	< 25 ms
Switch Lifetime ⁶	> 1 Billion Cycles
Input Power Range ⁶	Dark to +27 dBm

1. All specifications are measured separately at room temperature for each Test Wavelength

- 2. Tested with Encircled flux compliant light source
- 3. Excluding connector loss. Measured with 3-jumper method or equivalent (See TIA/EIA 526-7)
- 4. Over 100 cycles
- 5. 1 Hz sampling rate for 15 min
- 6. Met by design, not measured
- 7. 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





P/N: TCSD-08-01-F-N

SAMTEC CONNECTOR P/N: STMM-108-02-G-D