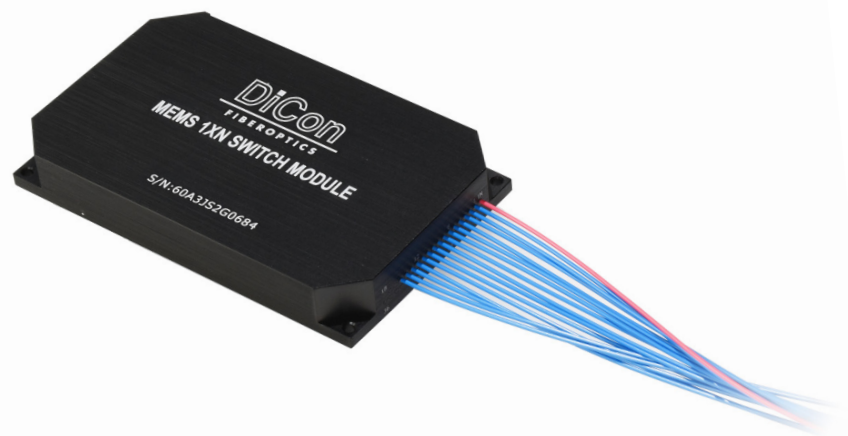


MEMS 1xN OPTICAL SWITCH

DiCon's MEMS 1xN Optical Switch is an industry proven fiber optic switch with excellent durability and reliability. It allows channel selection between a single input fiber and N output fibers, and the module allows for up to five MEMS switch components to be co-packaged with the option of switching synchronously. In addition, this optical switch is bi-directional and can be used in either a 1xN or Nx1 direction.



FEATURES

- Proven MEMS Durability and Reliability
- Compact Form Factor
- Fast Switching Time

APPLICATIONS

- Optical Communications
- Fiber Sensing
- Bio-medical Instrumentation
- Video Distribution



MEMS 1xN OPTICAL SWITCH

OPTICAL SPECIFICATIONS¹

| PARAMETER | | RATING |
|-------------------------------------|------------|-----------------------------|
| Insertion Loss ^{2,3} | 1x2, 1x4 | 0.7 dB max. |
| | 1x8 | 0.8 dB max. |
| | 1x12 | 1.2 dB max. |
| | 1x16, 1x24 | 1.5 dB max. |
| Crosstalk ⁴ | | -50 dB max. |
| Back Reflection | | -50 dB max. |
| Switching Time ⁵ | Up to 1x8 | 15 ms max. |
| | Up to 1x24 | 20 ms max. |
| Array Switching Time ^{6,7} | | 30 ms max. |
| TDL | | 0.40 dB max. |
| WDL ^{8,9} | | 0.30 dB max. |
| PDL ¹⁰ | | 0.10 dB max. |
| Repeatability ¹¹ | | 0.04 dB max. |
| Durability | | 10 ⁹ cycles min. |
| Optical Power | | 500 mW max. |
| Operating Temp | | -5 to 70°C |
| Storage Temp | | -40 to 85°C |
| Fiber Type | | 9/125 μm single mode |

- Specifications are without connectors.
- IL is measured at CWL, at room temp.
- IL is for single-band. Dual-band adds 0.2 dB.
- Power off isolation is same as crosstalk.
- Faster 1xN switching time version (10 ms max) available as a special request.
- Max switching time for all switches to the same state.
- Faster array switching time version (15 ms max) available as a special request.
- WDL is measured in a +/- 20nm range at room temp.
- WDL is N/A for the 1625 nm and 1650 nm wavelength range options.
- PDL is for single-band. Dual-band adds 0.05 dB.
- Repeatability is defined after 100 cycles.

MECHANICAL DIMENSIONS

| PARAMETER | DIMENSION |
|-----------|-----------|
| Length | 90.00 mm |
| Width | 55.00 mm |
| Height | 12.50 mm |

ORDERING INFORMATION

MS2 - - - - - -

Product Code

MS2 MEMS Switch

Switch Configuration

1xN 1xN, Specify N≤24
M/1xN M = # of 1xN Switches
1x2: M = 1 to 5
1x4: M = 1 to 5
1x8: M = 1 to 3
1x12: M = 1 to 2

Control Interface

I2C I²C
RS2 RS232
TTL TTL

Wavelength Range

13 1290 - 1330 nm
15 1530 - 1570 nm
16 1570 - 1610 nm
13/15 1290 - 1330 & 1530 - 1570 nm
15/16 1530 - 1570 & 1570 - 1610 nm
1625 1625 nm
1650 1650 nm

Custom Wavelength Ranges Available

Fiber and Jacket Type

9/BF Corning SMF-28, Bare fiber
9/LT Corning SMF-28, Loose-tube

Or other equivalent 9 μm Singlemode

Connector Type

FC FC/SPC
FC/APC FC/APC
LC LC/SPC
LC/APC LC/APC
N NONE

Also Available: MTP, MPO, SC, SC/UPC, SC/APC, ST, LC/UPC, FC/UPC

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, RS232 or TTL |
| Vcc Voltage | I ² C, RS232 | 12 VDC |
| | TTL | 5 VDC |
| Power Consumption | I ² C, RS232 | 1.0 W typ., 1.3 W max. |
| | TTL | 0.4 W typ., 0.7 W max. |
| Connector Type | | Molex 87833-1620 |