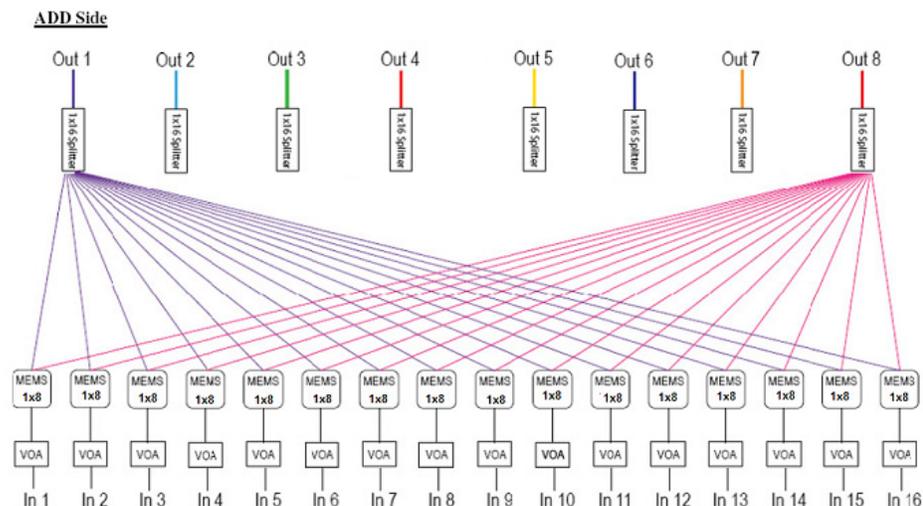


# MEMS DUAL Nx16 MULTICAST SWITCH WITH VOA

DiCon's MEMS Dual Nx16 Multicast Switch with VOA is based on DiCon's proven MEMS 1xN Switch and MEMS VOA, and incorporates two Nx16 Multicast Switches for add/drop functionality in a single package. For the drop side, input signals are first broadcast via 1x16 optical splitters into 16 optical switches, which are then used to independently route network traffic from any input to any or all output ports. For the add side, each switch receives an input and selects one of the N splitters to receive traffic for broadcast to the network. The integrated MEMS VOA allows dynamic adjustment of the power levels on the common ports of each 1xN switch. The MEMS Dual Nx16 Multicast Switch with VOA is ideal for colorless, directionless and contentionless add/drop multiplexing.



\* Only Add Side diagram is shown for clarity. Drop Side is functionally identical.

## FEATURES

- Compact Form Factor
- Excellent Thermal Stability
- Proven MEMS Durability and Reliability

## APPLICATIONS

The MEMS Dual Nx16 Multicast Switch with VOA allows network operators to split and dynamically route network traffic between N inputs and 16 outputs within add/drop banks in ROADM networks. Its bi-directional feature allows for flexible and dynamic traffic routing for tomorrow's reconfigurable networks.



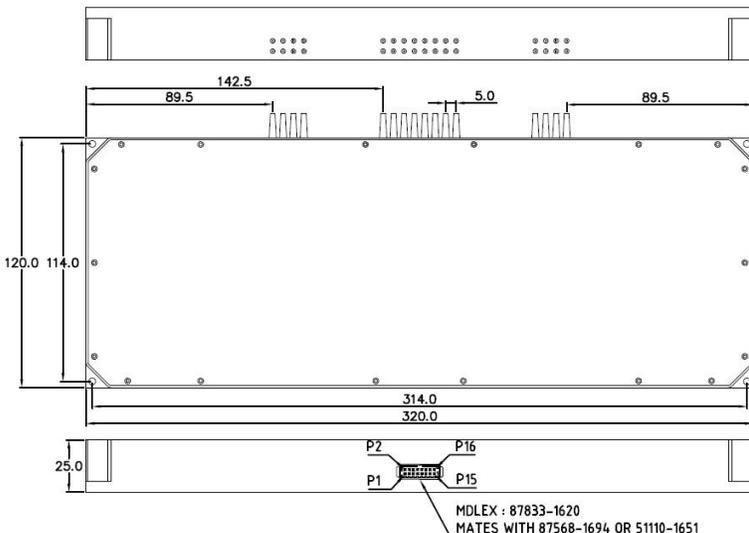
# MEMS DUAL Nx16 MULTICAST SWITCH WITH VOA

## OPTICAL SPECIFICATIONS<sup>1</sup>

| PARAMETER                       | RATING                      |              |
|---------------------------------|-----------------------------|--------------|
| Insertion Loss <sup>2,3,4</sup> | 15.6 dB max.                |              |
| Attenuation Range               | 20 dB max.                  |              |
| Crosstalk <sup>5</sup>          | -50 dB max.                 |              |
| Back Reflection                 | -40 dB max.                 |              |
| Switching Time                  | 100 ms max.                 |              |
| TDL <sup>6</sup>                | 0.7 dB max.                 |              |
| WDL <sup>7</sup>                | 0 to 15 dB                  | 0.9 dB max.  |
|                                 | 15 to 20 dB                 | 1.2 dB max.  |
| PDL <sup>8</sup>                | 0 to 15 dB                  | 0.55 dB max. |
|                                 | 15 to 20 dB                 | 0.6 dB max.  |
| Repeatability <sup>9</sup>      | 0.14 dB max.                |              |
| Durability                      | 10 <sup>9</sup> 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, 23°C and attenuation is 0 dB.
- IL is for standard opaque model.
- IL is for single-band. Dual band adds 0.2 dB.
- Power off isolation is same as cross talk. -35 dB max. for hitless switching.
- TDL is measured at 0 dB attenuation.
- WDL is measured in a +/- 20nm range at 23°C. Operation from 1290-1330 nm adds 0.4dB.
- Operation from 1290-1330 nm adds 0.1 dB.
- Repeatability is defined after 100 cycles.

## MECHANICAL DIMENSIONS (Units: mm)



## ORDERING INFORMATION

MSS -  -  -  -  -  -

### Switch Configuration

Nx16/DV Dual Nx16 with  
VOA, Specify N≤8

### Control Interface

I2C I<sup>2</sup>C  
RS2 RS232

### 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

### Fiber and Jacket Type

9/BF Corning SMF-28, Bare Fiber  
9/LT Corning SMF-28, Loose-Tube

### Connector Type

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

Also Available: SC, SC/UPC, SC/APC, ST, ST/UPC, LC

### 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 <sup>2</sup> C or RS232 |
| Vcc Voltage       | 12 VDC                    |
| Power Consumption | 8.64 W max.               |