DiCon’s MEMS On-Off Array Optical Switch allows precise control of up to 5 On-Off optical switches all through a single control interface, and housed in a compact housing. The On-Off switches can be controlled individually or synchronously. DiCon’s MEMS On-Off Optical switch has one input and one output fiber and provides the ability to turn on or off the optical signal passing through it.

**FEATURES**
- High Reliability
- Proven MEMS Technology
- Lifetime > 1 Billion Switch Cycles
- Controls up to 5 MEMS On-Off Optical Switches

**APPLICATIONS**
- Simulate Cutting of Fiber Optic Cables
- Secure Optical Communication
- Test & Measurement
MEMS ON-OFF OPTICAL ARRAY SWITCH

OPTICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss</td>
<td>0.8 dB max.</td>
</tr>
<tr>
<td>Back Reflection</td>
<td>-50 dB max.</td>
</tr>
<tr>
<td>Switching Time</td>
<td>30 ms max.</td>
</tr>
<tr>
<td>TDL</td>
<td>0.30 dB max.</td>
</tr>
<tr>
<td>WDL</td>
<td>0.20 dB max.</td>
</tr>
<tr>
<td>PDL</td>
<td>0.10 dB max.</td>
</tr>
<tr>
<td>Repeatability</td>
<td>0.05 dB max.</td>
</tr>
<tr>
<td>Durability</td>
<td>10⁹ cycles min.</td>
</tr>
<tr>
<td>Optical Power</td>
<td>500 mW max.</td>
</tr>
<tr>
<td>Operating Temp</td>
<td>-5 to 70°C</td>
</tr>
<tr>
<td>Storage Temp</td>
<td>-40 to 85°C</td>
</tr>
<tr>
<td>Fiber Type</td>
<td>9/125 µm single mode</td>
</tr>
</tbody>
</table>

1. Specifications are without connectors.
2. IL is measured at CWL, 23°C. In “ON” State.
3. WDL is measured in a +/- 20nm range at 23°C.
4. Repeatability is defined after 100 cycles.

MECHANICAL DIMENSIONS
(Units: mm)

Top View

Side View

ORDERING INFORMATION

Product Code
MQ2 MEMS Switch

Switch Configuration
M/1X1 M On-Off Switches (Ms5)

Control Interface
I2C I²C
RS2 RS232

Switch Type
T Transparent
O Opaque

Wavelength Range
13 1290 - 1330 nm
15 1530 - 1570 nm
16 1570 - 1610 nm

Off State Isolation
50 50 dB min.

Fiber and Jacket Type
9/BF Corning SMF-28, bare fiber
9/LT Corning SMF-28, 900um 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 +/- 10 cm

1. Minimum IL with no power.
2. Off state isolation with no power.

ELECTRICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latching Type</td>
<td>non-latching</td>
</tr>
<tr>
<td>Control Type</td>
<td>I²C or RS232</td>
</tr>
<tr>
<td>Vcc Voltage</td>
<td>12 VDC</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>700 mW max.</td>
</tr>
<tr>
<td>Connector Type</td>
<td>Molex 87833-1620</td>
</tr>
</tbody>
</table>