DiCon’s MEMS Reflection On/Off Switch provides an optical shutter that can return light through the input fiber. At the core of the switch is DiCon’s proprietary MEMS chip; an electrostatically driven mirror implemented using single-crystalline silicon and a stiction-free design. The mirror is capable of rotating along an axis, allowing the input light to be selectively redirected back to the input fiber.

FEATURES

- Proven MEMS Durability and Reliability
- Compact Form Factor
- Fast Switching Time
- Direct Voltage Control
- Qualified to GR-1221

APPLICATIONS

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

Specifications subject to change. Copyright © 2016 DiCon Fiberoptics, Inc. All rights reserved.
MEMS REFLECTION ON/OFF OPTICAL SWITCH

OPTICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>RATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss</td>
<td>≤ 0.7 dB max.</td>
</tr>
<tr>
<td>Switching Time</td>
<td>≤5 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>≤0.02 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.
3. IL is for single-band. Dual-band option adds 0.1 dB.
4. WDL is measured in a +/- 20 nm range at 23°C.
5. Repeatability is defined after 100 cycles.

MECHANICAL DIMENSIONS

Connectors:
- SC
- SC/UPC
- SC/APC
- ST
- ST/UPC
- LC
- Corning SMF-28, bare fiber
- Corning SMF-28, loose tube

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>Direct Voltage</td>
</tr>
<tr>
<td>Vcc</td>
<td>Transparent 0 - 7 VDC</td>
</tr>
<tr>
<td>Voltage</td>
<td>Opaque 0 - 7 VDC</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>20 μW max.</td>
</tr>
</tbody>
</table>

1. Min. IL is between 6 and 7 VDC.

ORDERING INFORMATION

Product Code: MS - REF10 - [ ] - [ ] - [ ] - [ ] - [ ]

Switch Type:
- T: Transparent Switch
- O: Opaque Switch

Wavelength Range:
- 13: 1290 - 1330 nm
- 15: 1530 - 1570 nm
- 16: 1570 - 1610 nm
- 13/15: 1290 - 1330 & 1530 - 1570 nm
- 15/16: 1530 - 1550 & 1570 - 1610 nm

Off State Isolation:
- 35: 35 dB min.
- 45: 45 dB min.
- X: Specify X dB min.

Fiber and Jacket Type:
- 9/BF: Corning SMF-28, bare fiber
- 9/LT: Corning SMF-28, loose tube
- Or other equivalent 9 μm Singlemode fiber

Connector Type:
- FC/SPC
- FC/APC
- N: NONE

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

Pigtail Length:
- 1: 1 Meter
- X: Specify X Meters

Tolerance is +/- 10 cm