

Miniature Opto-Mechanical Switch

MOMEX Series



The Lumentum next-generation miniature opto-mechanical (MOMEX) switch is a single component that provides high reliability under demanding central office and uncontrolled environments. Also, it is GR-1221 qualified.

Collimated beam optics, an epoxy-free optical path, and a specially designed mirror and moving prism mechanism enable excellent performance characteristics. Directly mountable on printed circuit boards, the MOMEX switch is equipped with status contacts to provide an electrical readout of the switch position.

Features

- 1x1, 1x2 (2x1), and 2x2 (bypass) in both latching and nonlatching configurations
- Unilateral input/output fiber location
- High durability

Applications

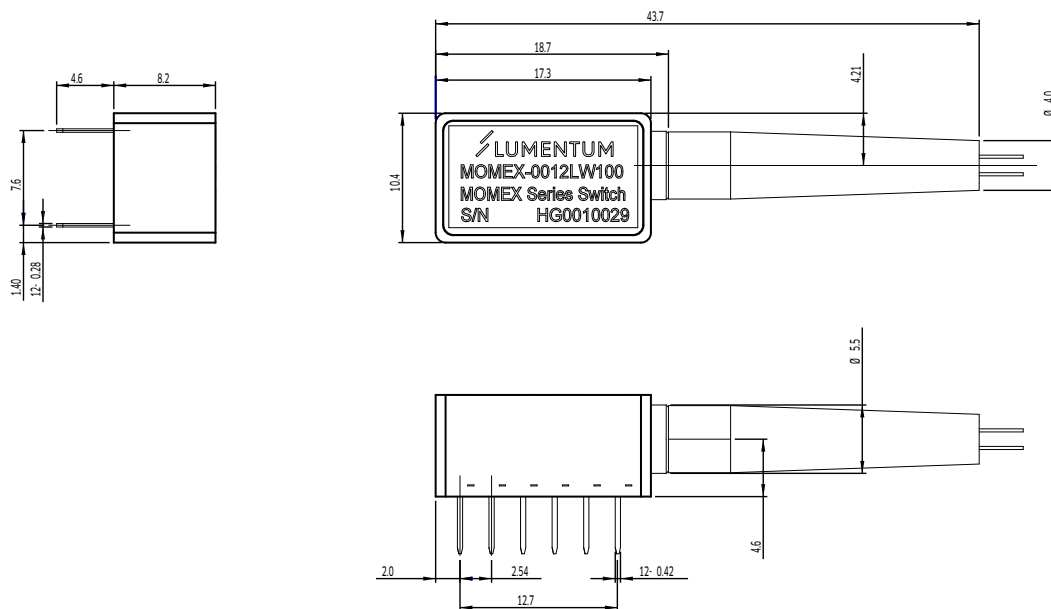
- Protection switching
- Network monitoring
- Used in equipment

Compliance

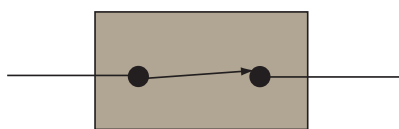
- Telcordia GR-1221-CORE and GR-1073-CORE

Dimensions Diagram

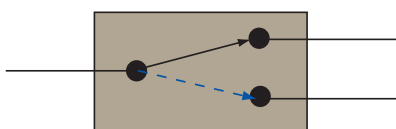
(Specifications in mm unless otherwise noted. There is a common footprint and electrical pinout for both the latching and non-latching versions.)



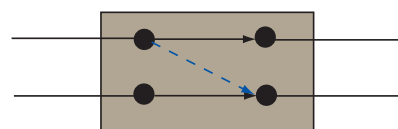
Functional Configurations



1x1



1x2



2x2 Bypass

Specifications

Parameter	Specification
Wavelength range	1290 to 1330 nm and/or 1525 to 1610 nm
Insertion loss ^{1,2} 1x1, 1x2 (2x1) 2x2 (bypass)	<0.5 dB (0.3 dB typical) <0.6 dB (0.4 dB typical)
Polarization dependent loss	<0.07 dB (0.03 dB typical)
Crosstalk	>55 dB (65 dB typical)
Return loss ¹	>50 dB (55 dB typical)
Optical input power	<500 mW
Repeatability	±0.02 dB (cycle to cycle)
Switching time ³	<4 ms (2.5 ms typical)
Switching voltage	5 ±10% V DC
Maximum switching current Latching Non-latching	32 mA 46 mA
Switch lifetime ⁴	10 million cycles
Cycle frequency	<10 Hz
Nominal dimensions (L x W x H)	17.3 x 10.4 x 8.2 mm
Operating temperature	0 to 70°C or -5 to 80°C short term ⁵
Humidity	<85% RH, or <90% RH short term ⁵
Storage temperature	-40 to 85°C
Qualification	Telcordia GR-1221-CORE and GR-1073-CORE

1. Specified without connectors.

2. Add an additional 0.3 dB for operation over the specified wavelength range, operating temperature range, and all states of polarization.

3. The elapsed time between power application and achievement of 90% of steady state value of the new switch.

4. One switch cycle is defined as one set pulse followed by a reset pulse.

5. Short term is defined as less than 96 consecutive hours and less than a total of 15 days over a 1-year period.

Ordering Information

For more information on this or other products and their availability, please contact your local Lumentum account manager or Lumentum directly at customer.service@lumentum.com.

Sample: MOMEX-12LW350

MOMEX -

Code	Port Configuration
11	1x1
12	1x2 (2x1)
22	2x2 (bypass)

Code	Wavelength
1	1525 to 1610 nm
4	1290 to 1330 nm
W	1290 to 1330 nm and 1525 to 1610 nm

Code	Fiber Type
1	250 μm buffer SMF-28 ¹
3	900 μm buffer SMF-28

Code	Connector Type
0	No connector
1	FC/PC
3	FC/APC
4	SC/PC
5	SC/APC
A	LC/APC
B	LC/PC
C	MU

Code	Latching Type
L	Latching
N	Non-latching

Code	Fiber Length ²
0	1.0 meter
5	1.5 meters

1. 250 μm buffer SMF-28 fiber is only available with the no connector option.
2. Tolerance on fiber length is ±0.1 m.

SMF-28 is a registered trademark of Corning Incorporated.
Telcordia is a registered trademark of Telcordia Technologies Incorporated.



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