

BUY NOW 

etMEMS™ 1x4 Series Non-Latching Fiber Optic Switch

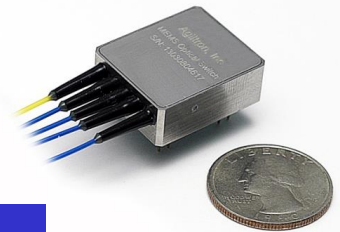
(Bidirectional, Single mode, PM)

(Protected by U.S. pending patents)

Product Description

The etMEMS™ 1x4 Series Non-Latching Fiber Optic Switch connects optical channels by redirecting incoming optical signals into selected output fibers. This is achieved using a patent pending etMEMS™ configuration and activated via an electrical control signal. It uniquely features rugged thermal activated micro-mirror movement instead of rotation.

This novel design significantly reduces packaging requirement and simplifies driving electronics, offering unprecedented high stability as well as an unmatched low cost.



Features

- High reliability
- Intrinsic tolerance to ESD

Performance Specifications

etMEMS™ Series 1x4 Switch	Min	Typical	Max	Unit
Operation Wavelength	Single Band	1310±40 or 1510±40		nm
	Dual Band	1310±40 and 1510±40		
	Broad Band	1260-1620		
Insertion Loss ^[1]		0.6	1.0 (1.2 ^[2])	dB
Wavelength Dependent Loss		0.15	0.3 ^[2]	dB
PDL (Single mode Switch)			0.1	dB
Extinction Ratio (PM Switch)	18			dB
Cross Talk ^[1]	50			dB
Return Loss ^[1]	50			dB
Switching Time		20		ms
Repeatability			±0.05	dB
Repetition Rate		10		Hz
Durability	10 ⁹			Cycle
Switching Type		Non-Latching		
Operating Temperature	-5		70	°C
Storage Temperature	-40		85	°C
Optical Power Handling (CW)		300	500	mW
Fiber Type	Single mode Switch	SMF-28 or equivalent		
	PM Switch	Panda 250, Panda 400 fiber or equivalent		

Applications

- Channel Blocking
- Configurable Add/Drop
- System Monitoring
- Instrumentation



Revised on 01/27/22
(Click here for latest revision)

[1]. Exclude connectors.
[2]. Dual and Broad band.

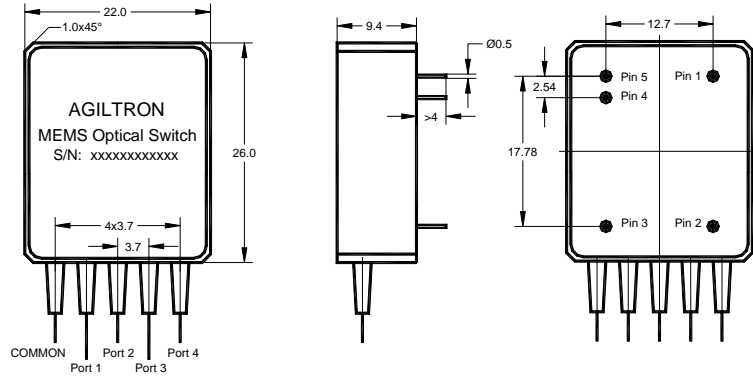
etMEMS™ 1x4 Series

Non-Latching Fiber Optic Switch

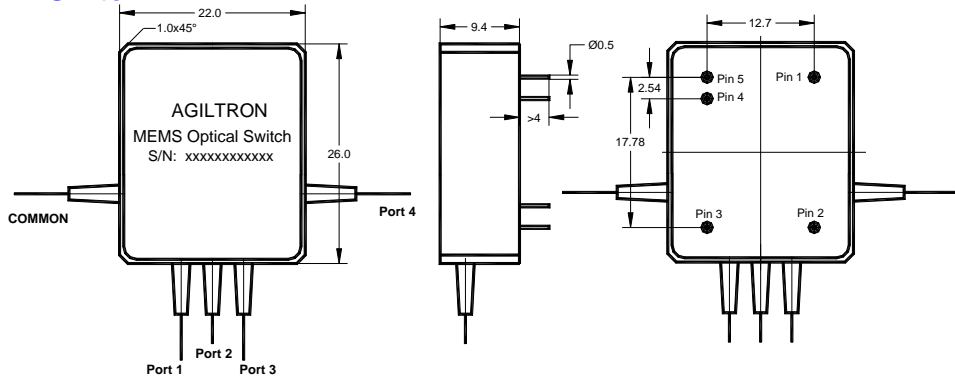
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Mechanical Dimensions (Unit: mm)

Single mode Switch



PM Switch



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Electronic Control Requirements

Optical Path	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5
Common↔Port 1	H	L	L	NC [1]	GND
Common↔Port 2	L	H	L	NC	GND
Common↔Port 3	L	L	H	NC	GND
Common↔Port 4	L	L	L	NC	GND

[1] NC: No electronic connection.

Driving Voltage		Min	Typical	Max	Unit
H	H1 version	3.5	3.6	4	VDC
	H2 version	4	4.5	5	VDC
L				0.8	VDC
Power Consumption (For each MEMS Chip)			170		mW

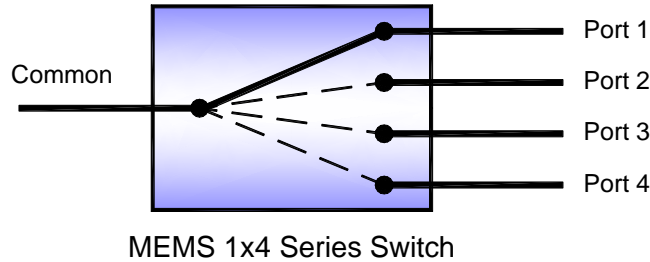


etMEMS™ 1x4 Series

Non-Latching Fiber Optic Switch

(Bidirectional, Single mode, PM)

Functional Diagram



Ordering Information

Type	Wavelength	Switch	Version	Fiber Type	Fiber Length	Connector
MEMS ^[1] MEPM ^[2]	1x3=13 1x4=14 Special=00 1060=1 C+L=2 1310=3 1550=5 780=7 850=8 1310/1550=9 1260~1620=B Special=0	Non-Latching=2	H1 = 1 H2 = 2 Special=0	SMF-28=1 Panda 400=A Panda 250=B Special=0	Bare fiber=1 900um tube=3 Special=0 0.25m=1 0.5m=2 1.0m=3 Special=0	None=1 FC/PC=2 FC/APC=3 SC/PC=4 SC/APC=5 ST/PC=6 LC=7 Duplex LC=8 Special=0

[1]. MEMS: MEMS 1x4 Single mode Switch.
[2]. MEPM: MEMS 1x4 PM Switch.

Recommendation Control Circuit

