

# MEMS 1x3, 1x4 PM Fiberoptic Switch

(Protected by U.S. pending patent)

## Product Description

The MEMS Series 1x3,1x4 PM Fiberoptic switch connects optical channels by redirecting incoming optical signals into selected output fibers. This is achieved using a patent pending MEMS 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

MEMS 1x3, 1x4 PM Switch	Min	Typical	Max	Unit
Operation Wavelength	850, 980, 1060, 1310, 1550			nm
Insertion Loss <sup>[1]</sup>		0.6	1.1	dB
Extinction Ratio	18			dB
Return Loss <sup>[1]</sup>	50			dB
Cross Talk <sup>[1]</sup>	50			dB
Switching Time		20		ms
Repeatability			±0.05	dB
Repetition Rate			20	Hz
Durability	10 <sup>9</sup>			Cycle
Switching Type		Non-Latching		
Operating Temperature	-5		70	°C
Storage Temperature	-40		85	°C
Optical Power Handling		300	500	mW
Fiber Type		Panda PM fiber <sup>[2]</sup>		

[1]. Exclude connectors.

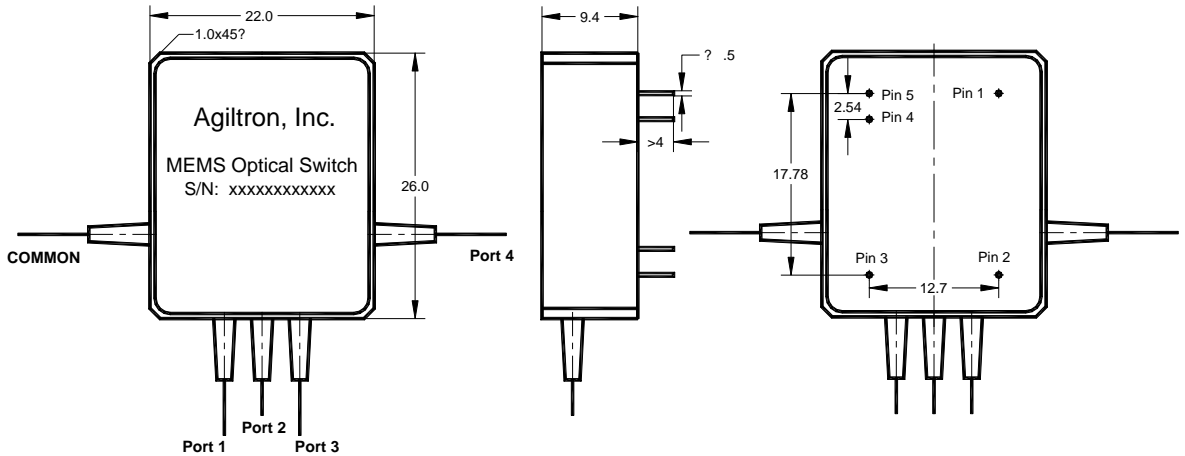
[2]. Please contact us for other fiber type.



Revision: 12-5-16

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## Mechanical Dimensions (Unit: mm)



## Electronic Control Requirements

Optical Path	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5
Common↔Port 1	H	L	L	NC <sup>[1]</sup>	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 Electrical connection.

Driving Voltage	Min	Typical	Max	Unit
H	4.0	4.5	5	V
L			0.8	V
Power Consumption (For each MEMS Chip)		170		mW

## Ordering Information

MEPM <sup>[1]</sup>	Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> 2 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1x3=13 1x4=14 Special=00	1060=1 1310=3 1410=4 1550=5 780=7 850=8 980=9 Special=0	Non-Latching=2	Standard=1 Special=0	PM 1550=5 PM 1310=7 PM 850=8 PM 980=9 Special=0	Bare fiber=1 900um loose 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]. MEPM: MEMS 1x3, 1x4 PM Switch.