

## MEMSLatch™ 1x3, 1x4 Fiberoptic Switch

(Protected by U.S. patent 13/210,703 and pending patents)

### Product Description

The MEMSLatch Series 1x3, 1x4 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 and latches to preserve the selected optical path after the drive signal has been removed. This novel design significantly reduces packaging requirement, offering unprecedented high stability as well as an unmatched low cost. It is conveniently driven by 5V.

We offer tight-bend-fiber version, which reduces the minimum bending radius from normal 15 mm to 7 mm. This feature enables smaller overall foot print.



### Performance Specifications

MEMS Series 1x3, 1x4 Switch	Min	Typical	Max	Unit
Operation Wavelength	1260		1620	nm
Insertion Loss <sup>1 2</sup>		0.6	1.0	dB
Wavelength Dependent Loss		0.2	0.3 (DW) <sup>3</sup>	dB
Polarization Dependent Loss			0.1	dB
Return Loss <sup>1 2</sup>	50			dB
Cross Talk <sup>1 2</sup>	50			dB
Switching Time			10	ms
Repeatability			±0.05	
Durability	10 <sup>9</sup>			Cycle
Switching Type		Latching		
Operating Temperature	-20		80	°C
Storage Temperature	-40		85	°C
Optical Power Handling		300	500	mW
Fiber Type		SMF-28		
Package Dimension		34.0L x 18.0W x 9.0H		mm

1. Within operating temperature and SOP.
2. Excluding connectors.
3. DW: Dual band and Broad band.

### Applications

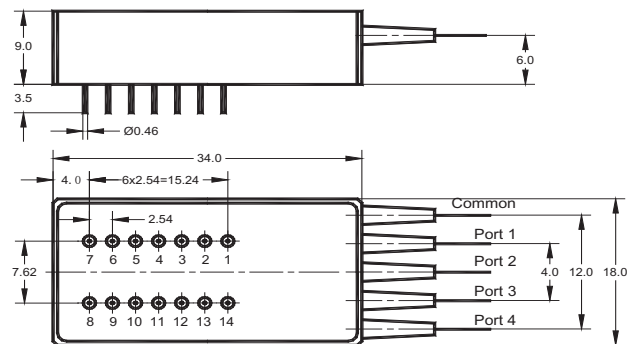
- Channel Blocking
- Configurable Add/Drop
- System Monitoring
- Instrumentation



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# MEMSLatch™ 1x3, 1x4 Fiberoptic Switch

## Mechanical Dimensions (Unit: mm)



## Electrical Driving Requirements

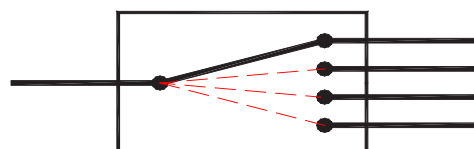
Agiltron offers a computer control kit with TTL and RS232 interfaces and Windows™ GUI.

Pin #	1	2	3	4	5	6	7
TTL/Parallel Digital I/O Mode	NC	VCC	STROBE	GND	D0	D1	D2
Pin #	8	9	10	11	12	13	14
TTL/Parallel Digital I/O Mode	NC	NC	NC	GND	NC	D3/MODE	RESET

1. VCC: 5 V DC.
2. Static Current Consumption: 20mA.
3. Peak Current Consumption: 200mA.

Optical Path	Electric Drive			
	D0	D1	D2	D3
Common Port 1	L	L	GND	GND
Common Port 2	H	L	GND	GND
Common Port 3	L	H	GND	GND
Common Port 4	H	H	GND	GND

## Functional Diagram



MEMS 1x4 Switch



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## Ordering Information

MEMS-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector		
1x3=13 3x1=31 1x4=14 4x1=41 Special=00	1060=1 C+L=2 1310=3 1410=4 1550=5 650=6 780=7 850=8 1310 & 1550=9 Special=0	Latching Type=1 Special=0	Standard=1 Special=0	SMF-28=1 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	



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