

etMEMS™ 2x2 Multimode Fiberoptic Switch

(Protected by U.S. pending patents)

Product Description

The etMEMS™ Series 2x2 Fiberoptic switch connects optical channels by redirecting incoming optical signals into selected output fibers. This is achieved using a proprietary etMEMS™ configuration and activated via an electrical control signal. It uniquely features rugged thermal activated micro-mirror, moving-in and -out optical paths instead of mirror rotation. This novel design significantly simplifies the control electronics, offering unprecedented high stability and an unmatched low cost.

We also offer the built-in driver version, which features a convenient user interface.



Performance Specifications

etMEMS™ 2x2 Switch	Min	Typical	Max	Unit
Operation Wavelength	Single Band: 820-880, 1260-1360 or 1510-1610			nm
	Dual Band: 850/1310, 1310/1510			
	Broad Band: 1260-1620			
Insertion Loss ^{[1], [3]}		0.6	1.0	dB
Wavelength Dependent Loss		0.2	0.3 ^[2]	dB
Return Loss ^[1]	35			dB
Cross Talk ^[1]	35			dB
Repeatability			±0.05	dB
Switching Speed		10		ms
Repetition Rate			20	Hz
Durability	10 ⁹			Cycle
Switching Type		Non-Latching		
Operating Temperature	-5		70	°C
Storage Temperature	-40		85	°C
Optical Power Handling		300	500	mW
Fiber Type	MM 50/125, MM 62.5/125, OM4			

[1]. Excluding connectors.

[2]. Dual band and Broad band.

[3]. Measure at Light source CPR<14dB.

Features

- High Reliability
- Intrinsic tolerance to ESD

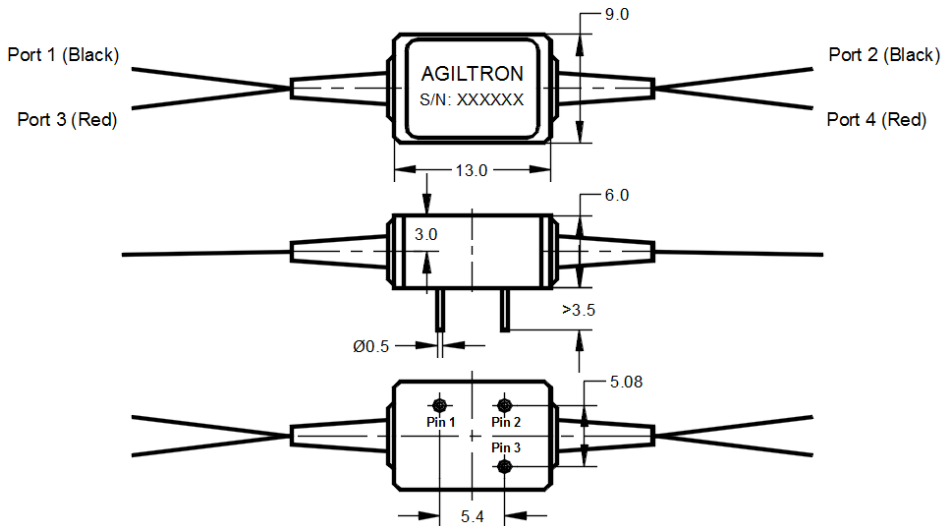
Applications

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



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Mechanical Dimensions (Unit: mm)



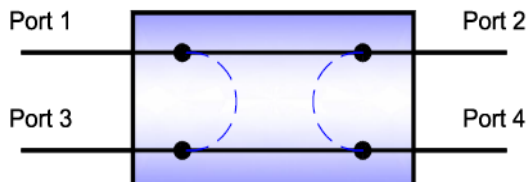
Electrical Driving Requirements

Optical Path	Pin 1	Pin 2	Pin 3
Port 1→2, Port 4→3	NC [1]	GND	L
Port 1→3, Port 4→2			H

[1]. NC: No electronic connection.

Driving Voltage	Min	Typical	Max	Unit
H	4.0	4.5	5.0	V
L			0.8	V
Power Consumption		170		mW

Functional Diagram



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Ordering Information

MEMS-	<input type="checkbox"/>	<input type="checkbox"/>	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector		
2x2=22 Special=00	1060=1 1310=3 1550=5 780=7 850=8 1310/1550=9 850/1310=A Special=0	Non-latching=2	Standard=1 Special=0	MM 50/125=5 MM 62.5/125=6 OM4=7 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	

Recommend MEMS Non-Latching Switch Driver

