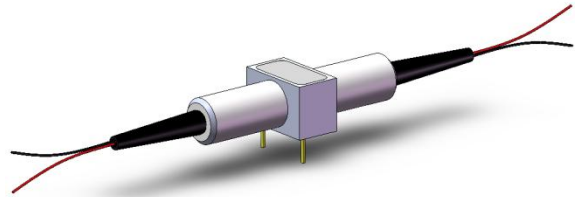


# etMEMS™ Mini 1x1, 1x2, 2x2 Multimode Fiberoptic Switch

(Protected by U.S. pending patents)

## Product Description

The etMEMS™ mini 1x1, 1x2, 2x2 multi-mode 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 simplify the control electronics, offering unprecedented high stability and an unmatched low cost.



## Performance Specifications

etMEMS™ 1x1, 1x2, 2x2 Switch	Min	Typical	Max	Unit
Operation Wavelength	Single band 820-880, 1260-1360 Dual band 820-880 and 1260-1360			nm
Insertion Loss <sup>[1, 3]</sup>		0.6	1.0	dB
Wavelength Dependent Loss		0.2	0.3 <sup>[2]</sup>	dB
Return Loss <sup>[1]</sup>	35			dB
Cross Talk <sup>[1]</sup>	35			dB
Switching Time		10		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	MM 50/125, MM 62.5/125, OM4			

[1]. Exclude connectors

[2]. Dual band

[3]. Measure at CPR≤15dB

## Features

- High Reliability
- Intrinsic tolerance to ESD

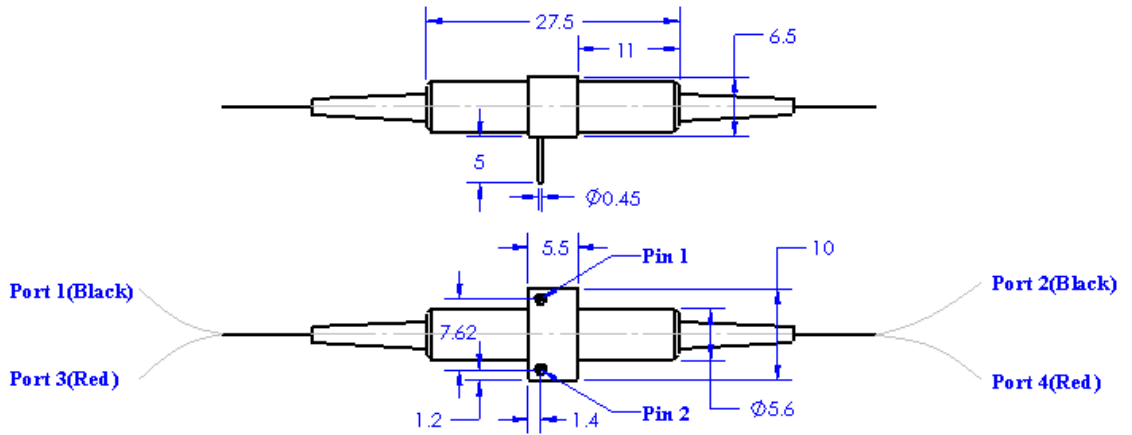
## Applications

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



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## Mechanical Dimensions (Unit: mm)

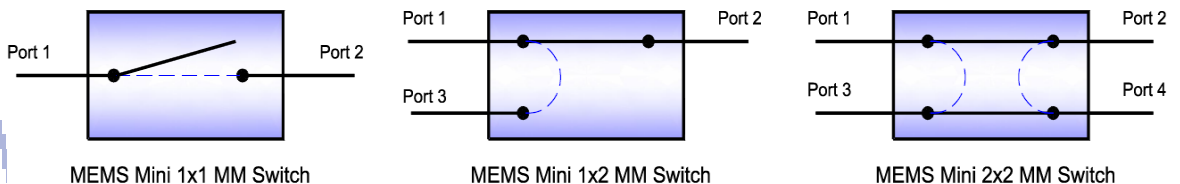


## Electrical Driving Requirements

Optical Path			Pin 1	Pin 2
1x1	1x2	2x2		
Block	Port 1↔3	Port 1↔3, Port 4↔2	L	GND
Port 1↔2	Port 1↔2	Port 1↔2, Port 4↔3	H	

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

## Functional Diagram



# etMEMS™ Mini 1x1, 1x2, 2x2 Multimode Fiberoptic Switch

## Ordering Information

MEMS-	Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1x1=11 1x1=12 2x2=22 Special=00	1060=1 1310=3 780=7 850=8 850 & 1310=A Special=0	Latching=1	Mini=9	MM50/125=5 MM62.5/125=6 OM4=7 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

## Recommend MEMS Non-Latching Switch Driver

