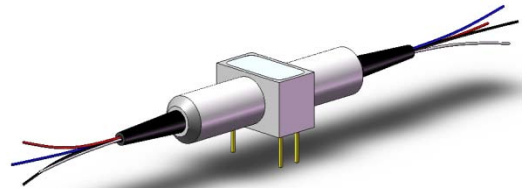


etMEMS™ Mini Dual Full 2x2 Multimode Fiberoptic Switch

(Protected by U.S. patent 8,203,775 and other patents pending)

Product Description

The etMEMS™ Mini Dual Full 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 movement instead of rotation, and latches to preserve the selected optical path after the drive signal and the power have been removed. This novel design significantly simplify the control electronics, offering unprecedented high stability and an unmatched low cost.



Performance Specifications

etMEMS™ MM Dual 2x2 Switch	Min	Typical	Max	Unit
Operation Wavelength	Single band 820-880, 1260-1360 Dual band 820-880 and 1260-1360			nm
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
Switching Time		5		ms
Repeatability			±0.05	dB
Repetition Rate			20	Hz
Durability	10 ⁹			Cycle
Switching Type	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
- Latching
- Intrinsic tolerance to ESD

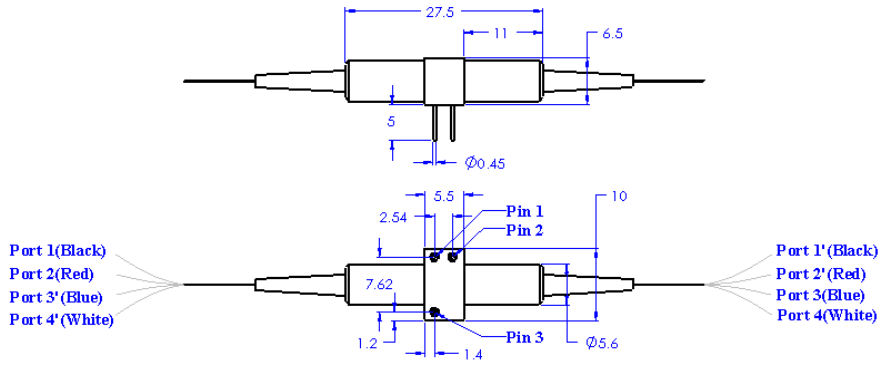
Applications

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



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Mechanical Dimensions (Unit: mm)



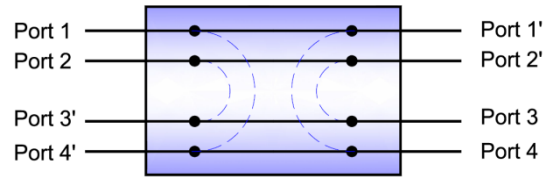
Electrical Driving Requirements

Optical Path	Pin 1	Pin 2	Pin 3
Port 1↔4', Port 2↔3' Port 3↔2', Port 4↔1'	Driving pulse	NC	GND
Port 1↔1', Port 2↔2' Port 3↔3', Port 4↔4'	NC	Driving pulse	

Driving Pulse	Min	Typical	Max	Unit
Pulse Voltage	9	9.3	9.5 [4]	V
Pulse Width	12	12.5	13 [4]	ms
Peak Current		290		mA

[4]. Attention! Outside this range could damage the device.

Functional Diagram



Ordering Information

MEDF*-	Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 9 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	2x2 = 22 Special=00	1060=1 C+L=2 1310=3 1410=4 1550=5 780=7 850=8 850/1310=B 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

* MEDF: MEMS Mini Dual Full Switch.

