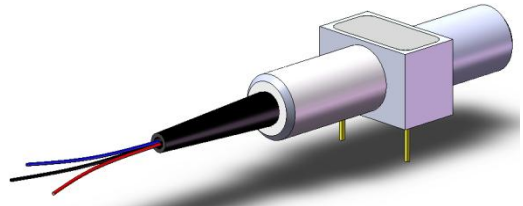


etMEMS™ 1x2 Mini Multimode Fiberoptic Switches

(Protected by U.S. pending patents)

Product Description

The etMEMS™ Series 1x2 Mini Multimode 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. This novel design significantly simplify the control electronics, offering unprecedented high stability and an unmatched low cost.



Performance Specifications

etMEMS™ 1x2 Mini MM switch	Min	Typical	Max	Unit
Operation Wavelength	Single band 820-880, 1260-1360 Dual band 820-880 & 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 Speed		10		ms
Repeatability			±0.05	dB
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]. Exclude connectors

[2]. Dual band

[3]. Measure at CPR ≤15dB

Features

- High Reliability
- Intrinsic tolerance to ESD

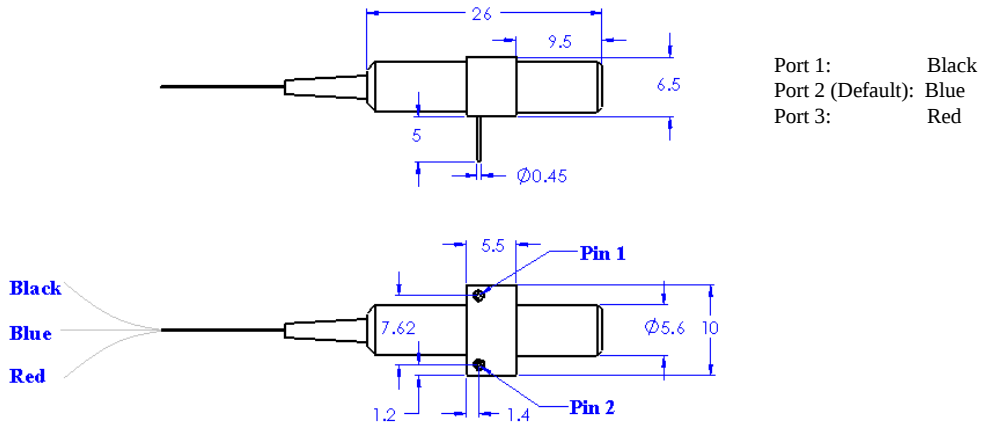
Applications

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



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Mechanical Dimensions (Unit: mm) & Function Diagram

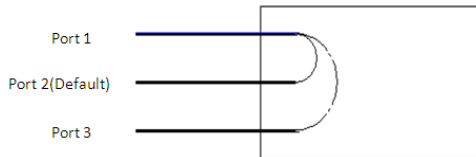


Electrical Driving Requirements

Optical Path	Pin 1	Pin 2
Port 1→2	L	GND
Port 1→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



Ordering Information

MERS*-	☐ ☐	☐	2	9	☐	☐	☐	☐
	Type	Wavelength	Switch	Package	Fiber Type		Fiber Length	Connector
	1x1=11 1x2=12 2x1=21 Special=00	1310=3 780=7 850=8 850 & 1310=9 Special=0	Non-Latching =2	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

MERS*: MEMS Reflective Switch

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MERS*: MEMS Reflective Switch

Recommend MEMS Non-Latching Switch Driver

