

etMEMS™ Dual Full 2x2 Non-Latching Fiberoptic Switch

(Protected by U.S. patent 6823102 and pending patents)

Product Description

The etMEMS™ Series Dual Full 2x2 Non-Latching Fiberoptic Switch optical connects 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™ Dual Full 2x2 Switch	Min	Typical	Max	Unit
Operation Wavelength	Single Band 1260-1360 or 1510-1620			nm
	Dual Band 1260-1360 and 1510-1620			
	Broad Band 1260-1620			
Insertion Loss ^[1]		0.6	1.2 ^[2]	dB
Wavelength Dependent Loss		0.15	0.3 ^[2]	dB
Polarization Dependent Loss			0.1	dB
Return Loss ^[1]	50			dB
Cross Talk ^[1]	50			dB
Switching Time		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 ^[3]		300	500	mW
Fiber Type		SMF-28 ^[3]		

[1]. Excluding connectors.

[2]. Dual and Broad band.

[3]. Please contact us for other SM fiber type.

Features

- Low Optical Distortions
- High Reliability
- Fail-Safe Latching
- Epoxy-Free Optical Path

Applications

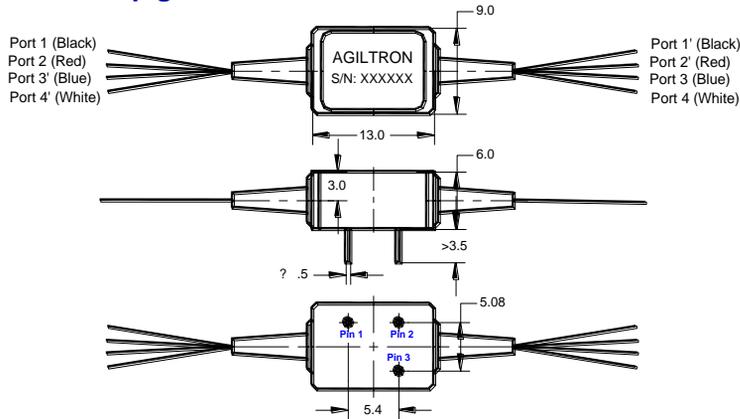
- Channel Blocking
- Configurable Add/Drop
- System Monitoring
- Instrumentation



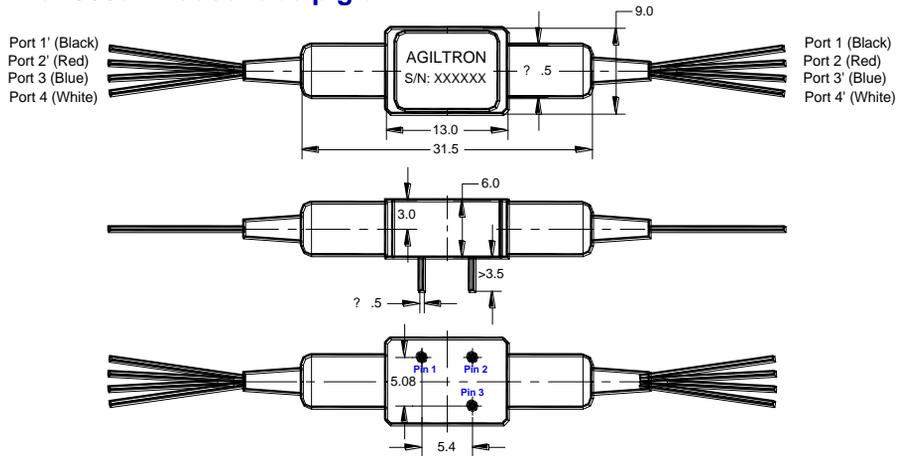
etMEMS™ Dual Full 2x2 Non-Latching Fiberoptic Switch

Mechanical Dimensions (Unit: mm)

For bare fiber pigtail.



For 900um loose tube pigtail.



Electrical Driving Information

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

[1]. No electronic connection.

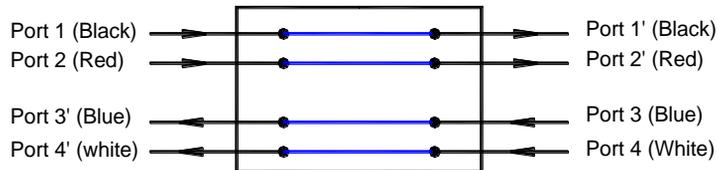
Driving Voltage	Min	Typical	Max	Unit
H	4.0	4.5	5.0	VDC
L			0.8	VDC
Power Consumption		170		mW



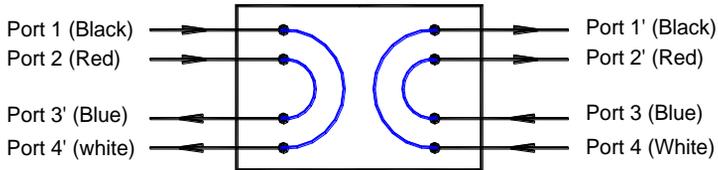
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Functional Diagram

Applying Power (Pin 2=GND, Pin 3=H)



No Power (Pin 2=GND, Pin 3<L)



Ordering Information

MEDU ^[1]	Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector
<input type="checkbox"/>	Dual 2x2=22 Special=00	1060=1 C+L=2 1310=3 1550=5 780=7 850=8 1310 & 1550=9 1260-1620=B Special=0	Non-Latching=2	P2 ^[2] =2 P3 ^[3] =3	SMF-28=1 Special=0	Bare fiber=1 900 loose tube=3 Special=0 0.25m=1 0.5m=2 1m=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

[1]. **MEDU:** MEMS Dual Full 2x2 Switch.
 [2]. **P2:** Package version 2 is for bare fiber pigtailed.
 [3]. **P3:** Package version 3 is for 900µm loose tube pigtailed.

