

# etMEMS™ Octo Full 2x2 Single Mode Fiberoptic Switch

(Protected by U.S. pending patents)

## Product Description

The etMEMS™ Series Octo Full 2x2 Single mode Fiberoptic switch integrates 8 Full 2x2 switches in a single compact format. It is designed for 40G transceiver bypass application. The device 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 the novel design significantly simplify the control electronics, offering unprecedented high stability and an unmatched low cost.

We offer the straight and reflective versions for the flexibility to connect fibers. In addition, we also offer the built-in driver version, which features a convenient user interface.



## Performance Specifications

MEMS Octo Full 2x2 SM Switch	Min	Typical	Max	Unit
Operation Wavelength	Single band 1260-1360, or 1510-1620 Dual band 1260-1360 and 1510-1620 Broad band 1260-1620			nm
Insertion Loss <sup>[1]</sup>		1.0	1.5	dB
Wavelength Dependent Loss		0.2	0.3 <sup>[2]</sup>	dB
Return Loss <sup>[1]</sup>	50			dB
Cross Talk <sup>[1]</sup>	50			dB
Switching Speed		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	SMF-28			

[1]. Excluding connectors.

[2]. Dual band and Broad band.

## Features

- High Reliability
- Low Optical Distortions
- Intrinsic tolerance to ESD

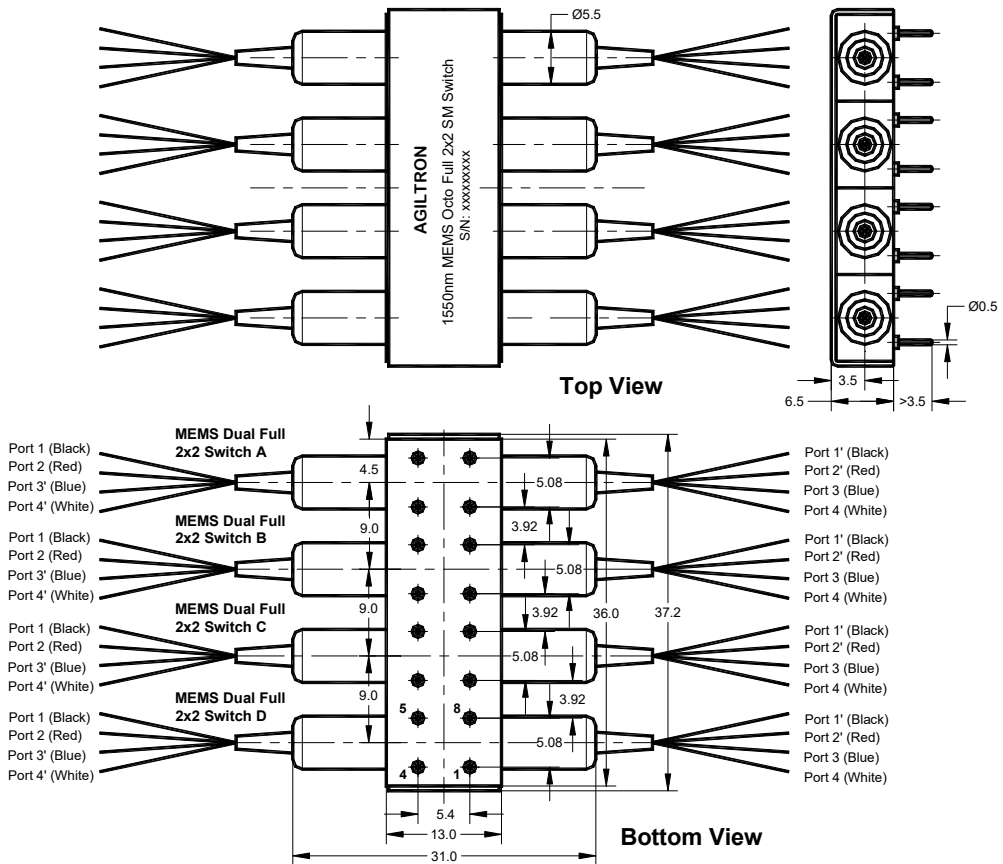
## Applications

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



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## Mechanical Dimensions (Unit: mm)



## Electrical Driving Requirements

Optical Path	Pin 1	Pin 8	Pin 4	Pin 5
Port 1↔ Port 1', Port 2↔ Port 2' Port 3↔ Port 3', Port 4↔ Port 4'	H	GND	NC [1]	NC
Port 1↔Port 4', Port 2↔ Port 3' Port 3↔Port 2', Port 4↔Port 1'	L			

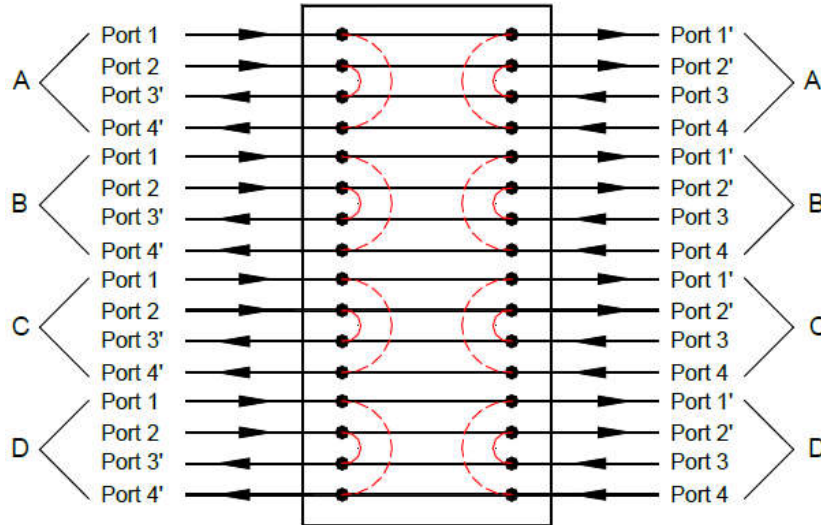
Driving Voltage	Min	Typical	Max	Unit
H	4.0	4.5	5.0	V
L			0.8	V
Power Consumption		170 [2]		mW

[1]. NC: No electronic connection.

[2]. For each MEMS Dual Full 2x2 Switch.

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## Functional Diagram



## Ordering Information

MEOF*-		2								
Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector				
2x2=22	1060=1 C+L=2 1310=3 1410=4 1550=5 1310/1550=9 Special=0	Non-Latching=2	Standard=1 Special=0	SMF-28=1 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			

\* MEOF: MEMS Octo Full 2x2 Switch.

