

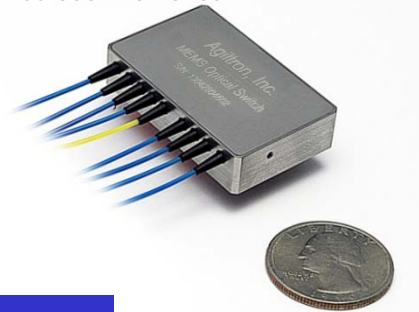
# etMEMS™ 1x8 Fiberoptic Switch

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

## Product Description

The etMEMS™ Series 1x8 Fiberoptic switch connects optical channels by redirecting incoming optical signals into selected output fibers. This is achieved using a patent pending 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 has been removed.

This novel design significantly reduces packaging requirement, and the driving electronics, offering unprecedented high stability as well as an unmatched low cost.



## Performance Specifications

etMEMS™ Series 1x8 Switch	Min	Typical	Max	Unit
Operation Wavelength		1310±30, 1550±30		nm
Insertion Loss <sup>[1]</sup>		0.7	1.2	dB
Wavelength Dependent Loss		0.15	0.25	dB
Polarization Dependent Loss			0.1	dB
Return Loss <sup>[1]</sup>	50			dB
Cross Talk <sup>[1]</sup>	50			dB
Switching Time		5		ms
Repeatability			±0.05	dB
Repetition Rate			10	Hz
Durability	10 <sup>9</sup>			Cycle
Switching Type		Latching		
Operating Temperature	-5		70	°C
Storage Temperature	-40		85	°C
Optical Power Handling		300	500	mW
Fiber Type		SMF-28 <sup>[2]</sup>		

[1]. Excluding connectors.

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

## Features

- High Reliability
- Latching
- Intrinsic tolerance to ESD

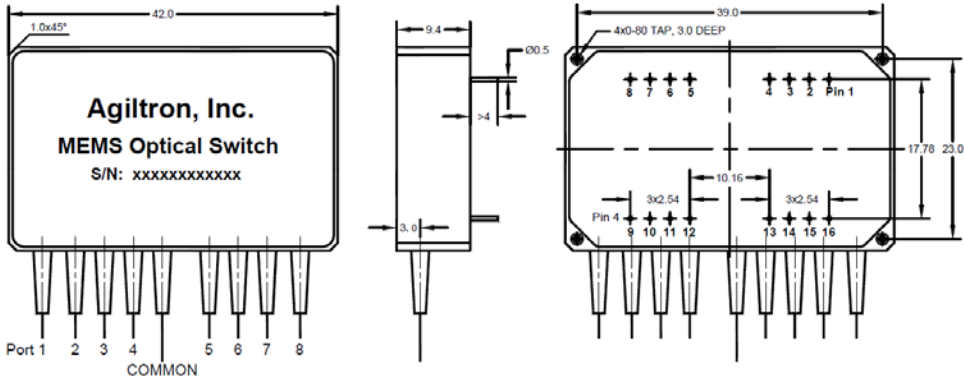
## Applications

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



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## Mechanical Dimensions (Unit: mm)



## Electrical Driving Requirements

Optical Path	Pin 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COMM↔Port 1	NC	DP*	NC	DP	NC	DP	NC	DP	NC	NC	NC	NC	NC	NC	GND	
COMM↔Port 2	DP	NC	NC	DP	NC	DP	NC	DP	NC	NC	NC	NC	NC	NC		
COMM↔Port 3	NC	NC	DP	NC	NC	DP	NC	DP	NC	NC	NC	NC	NC	NC		
COMM↔Port 4	NC	NC	NC	NC	DP	NC	NC	DP	NC	NC	NC	NC	NC	NC		
COMM↔Port 5	NC	NC	NC	NC	NC	NC	DP	NC	DP	NC	NC	NC	NC	NC		
COMM↔Port 6	NC	NC	NC	NC	NC	NC	DP	NC	NC	DP	DP	NC	NC	NC		
COMM↔Port 7	NC	NC	NC	NC	NC	NC	DP	NC	NC	DP	NC	DP	DP	NC		
COMM↔Port 8	NC	NC	NC	NC	NC	NC	DP	NC	NC	DP	NC	DP	NC	DP		

DP\*: Driving pulse

Driving Pulse	Min	Typical	Max	Unit
Pulse Voltage	9	9.3	9.5 [3]	V
Pulse Width	12	12.5	13 [3]	ms
Peak Current		290		mA

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

[4]. Please contact us for the built-in driver version.

## Ordering Information

MEMS-	Type	Wavelength	Switch	Package	Fiber Type	Fiber Length	Connector	
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1x8=18 8x1=81 Special=00	1060=1 1310=3 1410=4 1550=5 Special=0	Latching Type=1	Built-in driver version = 1 W/O built- in driver = 2 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

