MEMS™ Mini 1x8 Non-Latching Series Fiber Optic Switch

(Bidirectional, SM, PM)

(Protected by U.S. pending patents)

Features

- High reliability
- Intrinsic tolerance to ESD

Applications

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

RoHS Compliant

Revision: 9-29-19

Product Description

The MEMS™ 1x8 Series Non-Latching Fiber Optic Switch connects optical channels by redirecting incoming optical signals into selected output fibers. This is achieved using a patent pending MEMS™ configuration and activated via an electrical control signal. It uniquely features rugged thermal activated micro-mirror movement instead of rotation.

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

Performance Specifications

MEMS™ Series 1x8 Switch		Min	Typical	Max	Unit
Operation Wavelength		Single Band: 1310±40 or 1550±40			nm
		Dual Band: 1310±40 and 1550±40			
		Broad Band: 1260~1620			
Insertion Loss [1]	Single Band [2]		0.7	1.2	dB
	Dual Band [2]		0.8	1.4	
Wavelength Dependent Loss			0.2	0.3 [2]	dB
Polarization Dependent Loss (SM)				0.1	dB
Extinction Ratio (PM)		18	25		
Return Loss [1]		50			dB
Cross Talk [1]		50			dB
Switching Time			20		ms
Repeatability				±0.05	dB
Repetition Rate			10		Hz
Durability		10^9			Cycle
Switching Type			Non-Latching		
Operating Temperature		-5		70	°C
Storage Temperature		-40		85	°C
Optical Power Handling			300		mW
Fiber Type	(Single Mode Switch)		SMF-28 fiber or equivalent		
	(PM Switch)		Panda 250 fiber or equivalent		

[1]. Excluding connectors.

[2]. Dual band and Broad band.

15 Presidential Way, Woburn, MA 01801 Tel: (781) 935-1200 Fax: (781) 935-2040
www.agiltron.com

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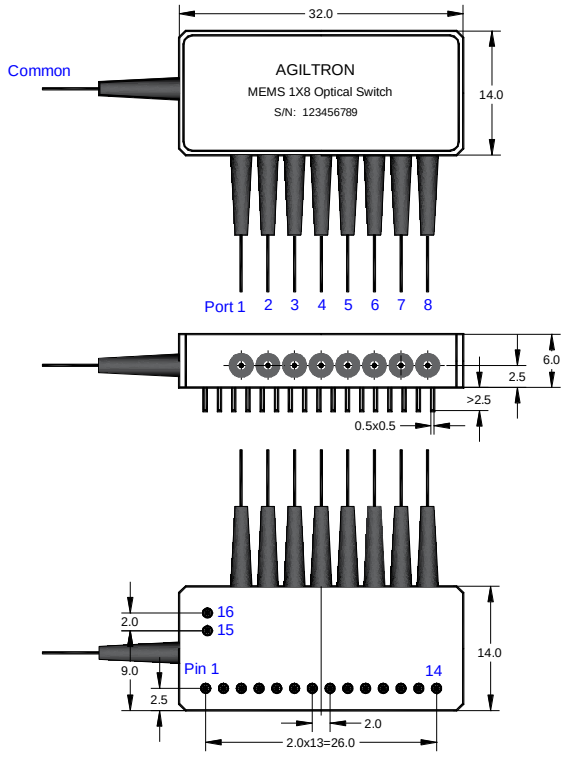
Mechanical Dimensions (Unit: mm)



Driving Requirements

Optical Path	Pin Number															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COMM ↔ Port 1	H	GND	L	GND	L	GND	L	GND	L	GND	L	GND	L	GND	NC [1]	NC
COMM ↔ Port 2	L		H		L		L		L		L		L			
COMM ↔ Port 3	L		L		H		L		L		L		L			
COMM ↔ Port 4	L		L		L		H		L		L		L			
COMM ↔ Port 5	L		L		L		L		H		L		L			
COMM ↔ Port 6	L		L		L		L		L		H		L			
COMM ↔ Port 7	L		L		L		L		L		L		H			
COMM ↔ Port 8	L		L		L		L		L		L		L			

[1] NC: No electronic connection.

Driving Voltage		Min	Typical	Max	Unit
H	H1 version	3.5	3.6	4	VDC
	H2 version	4	4.5	5	VDC
L				0.8	VDC
Power Consumption (For each MEMS Chip)			170 [1]		mW

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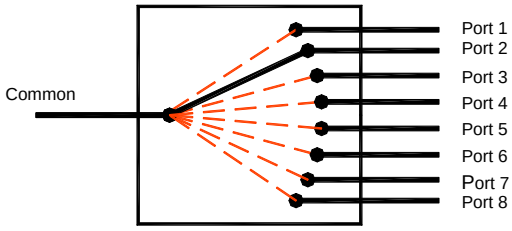


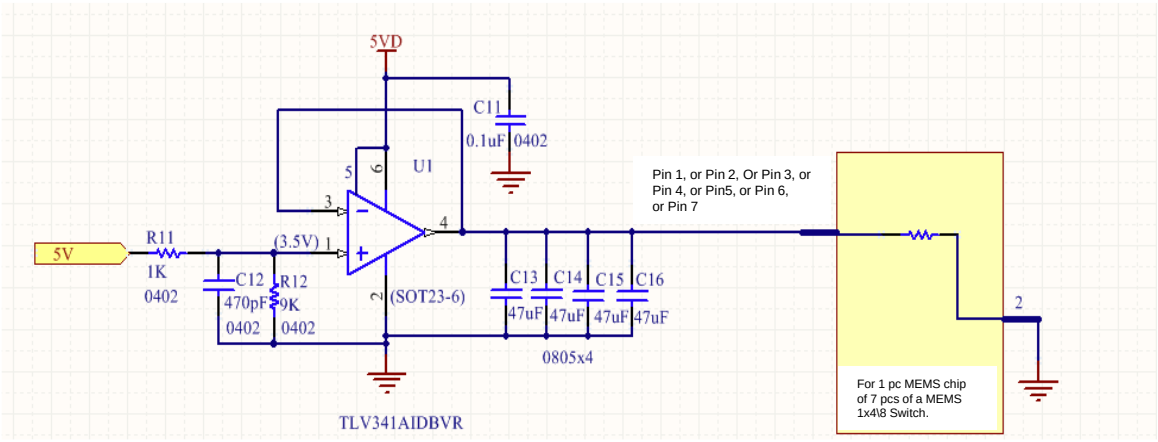
MEMS 1x8 Switch

Ordering Information

□□□□-	□□	□	2	□	□	□	□	□
	Type	Wavelength	Switch	Version	Fiber Type		Fiber Length	Connector
MESM [1] MEMP [2]	1x5=5 1x6=6 1x7=7 1x8=18 Special=00	1060=1 C+L=2 1310=3 1410=4 1550=5 1310 & 1550=9 1260~1620=B Special=0	Non-Latching=2	H1 = 1 H2 = 2 Special=0	SMF-28=1 PM 400=A PM 250=B 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

[1]. **MESM: MEMS** 1x8 **S**ingle Mode **M**ini Switch.
[2]. **MEMP**: **ME**MS 1x8 **M**ini **P**M Switch.

Recommendation Control Circuit



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