

MEMS Optic Switch

MEMS OSW is based on micro-electro-mechanical system (MEMS) technology, which achieved low insertion loss and highly repeatability by rotating the mirror of MEMS chip.

MEMS OSW is mainly used in optical cross and connection (OXC) system, optical add/drop system, measure instrument system and optical signal monitoring system.

The products are Telcordia GR-1073-CORE qualified, and RoHS compliant

Features

- High Reliability
- Intrinsic tolerance to ESD

Applications

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

Performance

Parameters	Unit	Value
Wavelength	nm	1310/1550
Insertion Loss	Without connector dB	≤ 1.0
Return Loss	dB	≥ 50
Repeatability	dB	≤ 0.1
Crosstalk	dB	≥ 50
Polarization Dependence Loss	dB	≤ 0.15
Wavelength Dependence Loss	dB	≤ 0.3
Temperature Dependence Loss	dB	≤ 0.3
Switch Time	ms	≤ 30
Durability	cycle	$\geq 1 \times 10^9$
Maximum optical Power	mW	≤ 500
Switch Mode		Non-Latching
Power Voltage	V	5
Power Consumption	mW	≤ 500
Operation Temperature	°C	-5~70
Storage Temperature	°C	-40~85
Dimension	mm	(L)68x (W)30x(H)13

PINS:

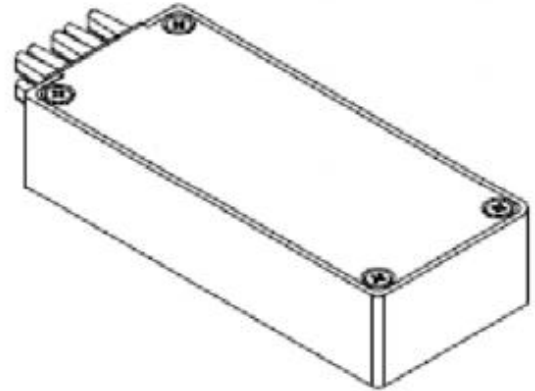
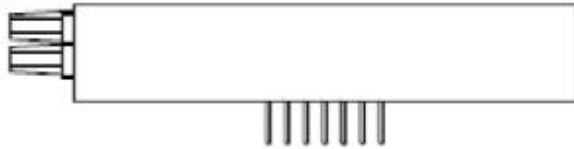
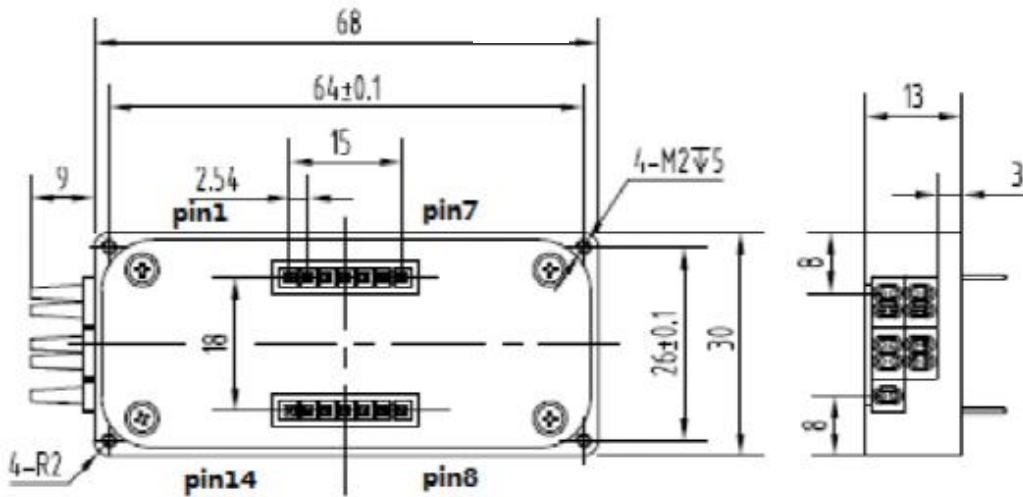
Pin Number	Name	Inout/Ouput	Level	Function
1	NC	NO connector		
2	VCC	Power supply		+(5.0±5%)V Power Supply Max 100mA
3	Strobe	Input	LVTTL	For TTL Mode:Falling edge active , latches D3-D0 inputs

				For I Mode:Not used
4	GND	Power supply ground		Power supply ground
5	D0/A0	Input	LVTTL	For TTL Mode:Data 0 input For I Mode:A0 for I address
6	I Data	Inout/Ouput	LVTTL	For TTL Mode:Not used For I Mode:I interface Data
7	I Clock	Input	LVTTL	For TTL Mode:Not used For I Mode:I interface Data
8	I/F Mode	Input	LVTTL	Select TTL or I mode *for TTL mode *for I mode
9	D2/A2	Input	LVTTL	For TTL Mode:Data 2 input For I Mode:A2 for I address
10	/Done	Output	LVTTL	Optical switch done, low active
11	Case GND	Case ground		Case ground
12	D1/A1	Input	LVTTL	For TTL Mode:Data 1 input For I Mode:A1 for I address
13	D3/A3	Input	LVTTL	For TTL Mode:Data 3 input For I Mode:A3 for I address
14	Reset	Input	LVTTL	Rest,low active,the pulse width needs 500us

Optic Switch ports truth value

I/F Mode	D0	D1	D2	D3	/Done	Optical switch Status
1	0	0	0	0	0	1
1	1	0	0	0	0	2
1	0	1	0	0	0	3
1	1	1	0	0	0	4
1	0	0	1	0	0	5
1	1	0	1	0	0	6
1	0	1	1	0	0	7
1	1	1	1	0	0	8
1	0	0	0	1	0	9
1	1	0	0	1	0	10
1	0	1	0	1	0	11
1	1	1	0	1	0	12
1	0	0	1	1	0	13
1	1	0	1	1	0	14
1	0	1	1	1	0	15
1	1	1	1	1	0	16

Dimensions



◇ Ordering Information: MSW-1×N-A-B-C-D-E-F

N	A	B	C	D	E	F	
Port	Mode	Wavelength	Fiber Diameter	Fiber Length	Connector	Interface	
4	SM:9/125um	13: 1310nm	25:250um	05:0.5m	OO:None	MS1:TTL/I2C	
8		14: 1490nm	90:900um	10:1.0m	FP: FC/PC	MS2:TTL/RS232	
12		15: 1550nm			15:1.5m	FA: FC/APC	MS3:TTL/I2C/RS232
16						SP: SC/PC	
					SA: SC/APC		
					LP: LC/PC		
					LA: LC/APC		