

## MEMS 1xN Optical 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.

### ▣ Specifications

Parameters	Unit	1xN					
Wavelength	nm	1260-1650					
Insertion Loss	dB	Typ≤0.8,Max≤1.2	1x4	1x8	1x16	1x24	1x32
			≤0.8		≤1.0		≤1.2
Return Loss	dB	≥50 (MM>40)					
Repeatability	dB	≤0.1					
Crosstalk	dB	≥55	≥50 (MM>40)				
PER ①	dB	≥16					
Polarization Dependence Loss	dB	≤0.15					
Wavelength Dependence Loss	dB	≤0.3					
Temperature Dependence Loss	dB	≤0.3					
Switch Time	ms	≤5	≤10				
Durability	cycle	≥1x10 <sup>9</sup>					
Maximum optical Power	mW	≤500					
Switch Mode		Non-latching					
Power Voltage	V	0~15	<60				
Power Consumption	mW	≤500					

1x1/1x2/1xN

Parameters	Unit	MEMSTD
wavelength	nm	850,1310,1520~1580,1280~1340
Insertion Loss*	dB	Typ: 0.6 Max:1.0
Return Loss	dB	>50
Crosstalk	dB	>50
Switch Time	ms	<5
Repetition Rate	KHz	0.5
Switch Type		Non-Latching
Polarization Dependent Loss	dB	0.10
Repeatability	dB	±0.05
Operation Temperature	°C	-5~+70
Storage Temperature	°C	-40~+85
Weight	g	10
Dimension	mm	(L)12.0×(W)6.8×(H)5.6 (±0.2)

2x2

▣ **Electrical parameters**

Parameters	Min.	Typical	Max.	Unit
Switch Voltage	13	13.5	14	V
Switch Current	19	20	21	mA
Pulse Duration				ms

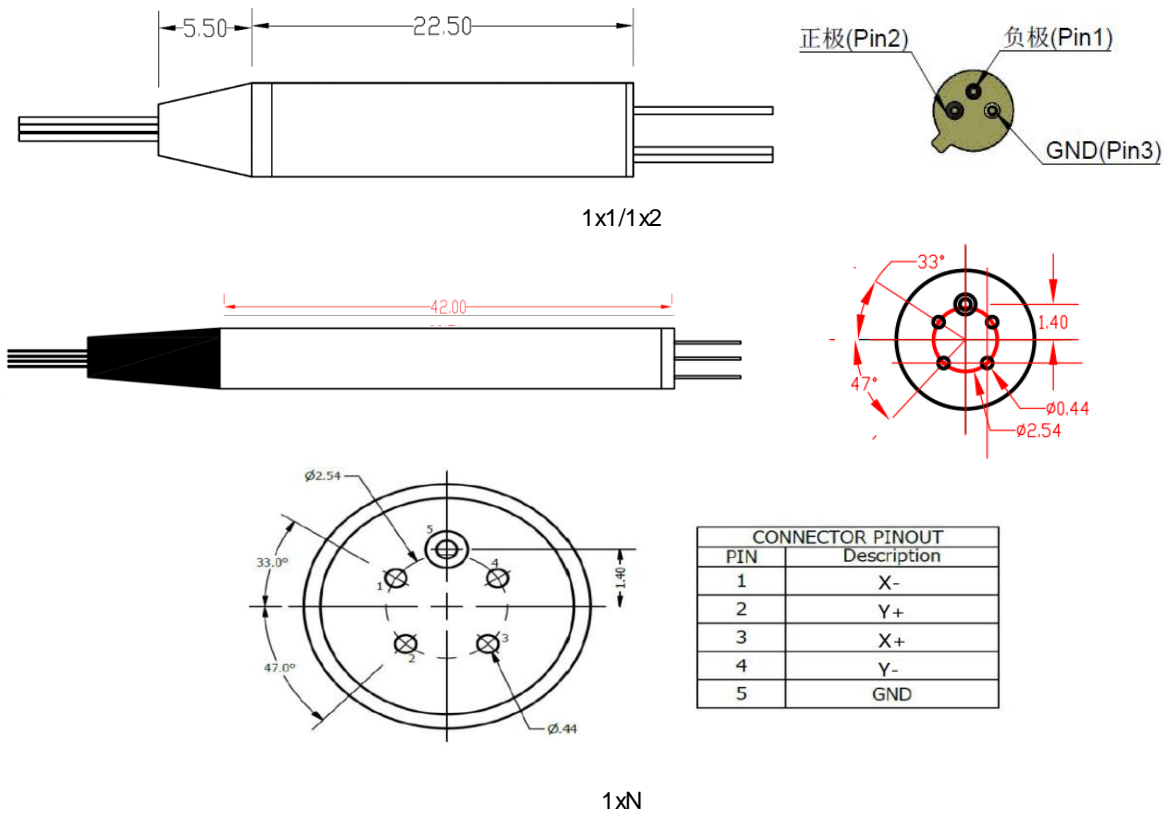
▣ **OPERATION/STORAGE TEMPERATURE/HUMIDITY**

NO	PARAMETER	SPECIFICATION	UNITS	NOTE
3.1	Operation Temperature	-5~65	°C	
3.2	Storage Temperature	-40~85	°C	
3.3	Operation Humidity	5~95	%RH	
3.4	Storage Humidity	5~95	%RH	

**PIGTAIL AND CONNECTOR**

NO	PARAMETER	1x1/1x2	1xN	UNITS
4.1	Fiber Type	SMF-28 (G657A3)	SM ,MM,PM	
4.2	Fiber Pigtail(All Ports)	250um	250um	
4.3	Fiber Length(All Ports)	1±0.05	1±0.05	m
4.4	Optical Connector (All port)	None	None	
4.5	Dimension	5.5X22.5	5.5X42	mm

MECHANICAL DRAWINGS



Ordering Information: MSW-1xN-A-B-C-D-E-F-G

N	A	B	C	D	E	F
Port	Mode	Wavelength	Fiber Diameter	Fiber Length	Connector	Shell
1-64	SM:9/125um M5:50/125 M6:62.5/125 PM: Pmfiber	85: 850nm 13: 1310nm 15: 1550nm 16: 1610nm	25:250um 90:900um	05:0.5m 10:1.0m 15:1.5m	OO:None FP: FC/PC FA: FC/APC SP: SC/PC SA: SC/APC LP: LC/PC LA: LC/APC	T:TO46 M: Modular