

## 4×4 Micro Mechanical Optical Switch

4×4 Optical switch is a kind of device with the ability of optical route switch. In optic fiber transmission system, it is used for optical route controlling, LAN, light source / detector changing, and protecting the change of Ethernet etc. In optical fiber test system, it is used for optical fiber and optical fiber device testing, network testing, open-air optical cable testing and optical fiber sensing.

### Features

- Low Insertion Loss
- Wide Wavelength Range
- Low crosstalk
- High Stability, High reliability
- Parallel Interface (TTL)
- Epoxy-free on optical path



### Applications

- Ring network
- Remote monitoring in optical network
- Testing of fiber, optical Component

### Specifications

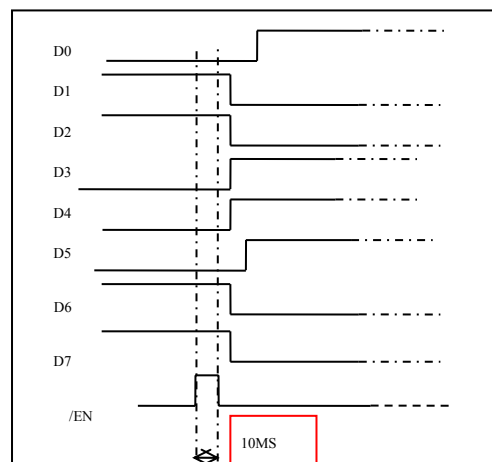
Parameters		MMOSW-4×4					
		1310 or 1490 or 1550 (SM)		1310 & 1490 & 1550 (SM)		850 or 1310(MM)	
Wavelength Range	nm	1310 or 1490 or 1550 (SM)		1310 & 1490 & 1550 (SM)		850 or 1310(MM)	
Insertion Loss	dB	Typ:1.5	Max:2.5	Typ:1.8	Max:2.8	Typ:1.8	Max:2.8
PDL	dB	≤0.05					
Return Loss	dB	SM≥50、MM≥30					
WDL	dB	≤0.25					
Crosstalk	dB	≤0.25					
Repeatability	dB	SM≥55、MM≥35					
Power Supply	v	≤±0.02					
Lifetime	times	5.0					
Switch Time	ms	≥107					
Transmission Power	mW	≤8					
Operating Temperature	℃	≤500					
Storage Temperature	℃	-20~+70					
Dimension	mm	-40~+85					

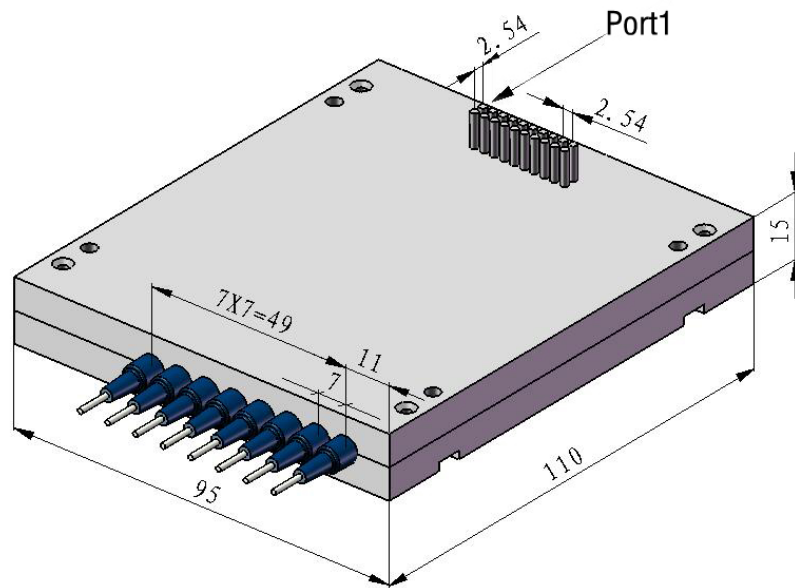
**Ordering Information**
**MMOSW-4×4-①①-②-③-④-⑤-⑥-⑦**

①①: Wavelength	②: Mode	③: Connector Type	④: Fiber Jacket	⑤: Fiber Length
65 - 1650nm	S: SM	1 - FC/PC	B - 250 μm Panda fiber	0 - 0.5 m
62 - 1625nm	M: MM	2 - FC/APC	L - 900 μm loose tube	1 - 0.75 m
55 - 1550nm		3 - SC/PC	D - 2mm cable	2 - 1 m
49 - 1490nm		4 - SC/APC	C - 3 mm cable	3 - 1.5 m
31 - 1310nm		5 - ST/PC	S - Specify	S - Specify
85 - 850nm		6 - ST/APC		
		7 - LC/PC	⑥: Fiber Type	⑦: Voltage Type
		8 - LC/APC	1 - 50/125	3 - 3V
		N - None	2 - 62.5/125	5 - 5V
		S - Specify	3 - 9/125	
			S - Specify	

**4×4 Optical Switch Pins**

1	D0	11	D6
2	D1	12	D7
3	D2	13	S0
4	D3	14	S1
5	/EN	15	S2
6	RST	16	S3
7	VCC	17	S4
8	GND	18	S5
9	D4	19	S6
10	D5	20	S7

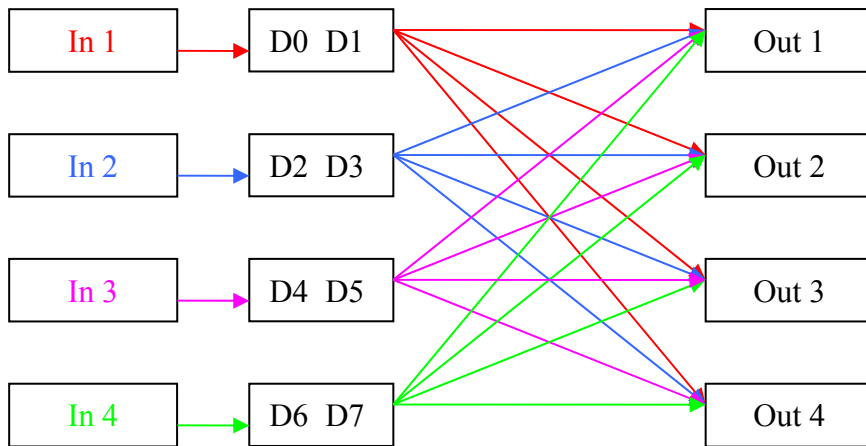
**4×4 Optical Switch Switching Sequence Chart**

**4×4 Optical Switch Dimensions (mm)**



**Truth Table**

Input routes	Control pin			Output Route	Inquiring status value	
	D0	D1	Value		S0	S1
First Route	0	0	0	1→1	0	0
	1	0	1	1→2	1	0
	0	1	2	1→3	0	1
	1	1	3	1→4	1	1
Second Route	D2	D3	Value		S2	S3
	0	0	0	2→1	0	0
	1	0	1	2→2	1	0
	0	1	2	2→3	0	1
Third Route	1	1	3	2→4	1	1
	D4	D5	Value		S4	S5
	0	0	0	3→1	0	0
	1	0	1	3→2	1	0
Fourth Route	0	1	2	3→3	0	1
	1	1	3	3→4	1	1
	D6	D7	Value		S6	S7
	0	0	0	4→1	0	0
Fourth Route	1	0	1	4→2	1	0
	0	1	2	4→3	0	1
	1	1	3	4→4	1	1

**The Composition of Data order**



Note: One output can just has one input.