4×4 Optical Switch

Features

- Wide Wavelength Range
- Low Crosstalk
- High Stability, High Reliability
- Epoxy-free on Optical Path

Applications

- R&D in Laboratory
- System Monitoring
- OADM
- OXC

FSW-4x4 Optical Switch is an ideal component for OADM，OXC，system monitoring and protection. With compact package, it can be easy to integrate into a high density optical communication system.

Specifications

Parameters	Unit	FSW-4×4	
Wavelength Range	nm	850±40 / 1300±40	1260 ~ 1650
Test Wavelength	nm	850 / 1300	1310 / 1550
Insertion Loss	dB	Typ: 2.3 Max: 2.6	
Return Loss	dB	MM ≥ 30 SM ≥ 50	
Crosstalk	dB	MM ≥ 35 SM ≥ 55	
PDL	dB	≤ 0.15	
WDL	dB	≤ 0.35	
Repeatability	dB	≤ ±0.05	
Power Supply	V	5.0 ± 5%	
Durability	Cycles	≥ 10 Million	
Switching Time	ms	≤8	
Optical Power	mW	≤500	
Operating Temperature	℃	-5 ~ +70	
Storage Temperature	℃	-40 ~ +85	
Relative Humidity	%	5 ~ 95	
Dimension	mm	(L)110×(W)95×(H)14 ±0.2	

肯耐國際股份有限公司
10627 台北市大安區忠孝東路四段 148 號 12 樓之 1 Add: 12F-1., No. 148, Sec. 4, Zhongxiao E. Rd., Taipei 10627, Taiwan Tel: (886-2) 6617-6112 Fax: (886-2) 8771-8345
www.kennine.com

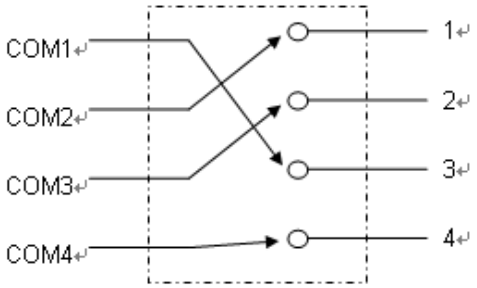
Pin Configurations

Pin No.	Signal Name	I / O	Description
1	1D0	Input	TTL, COM 1 Channel selection bit 0
2	1D1	Input	TTL, COM 1 Channel selection bit 1
3	2D0	Input	TTL, COM 2 Channel selection bit 0
4	2D1	Input	TTL, COM 2 Channel selection bit 1
5	/EN	Input	Channel Selection Enabled.
6	RST	Input	Reset
7	VCC	Input	5.0±5% VDC Power Supply (max 250mA).
8	GND	Input	Ground
9	3D0	Input	TTL, COM 3 Channel selection bit 0
10	3D1	Input	TTL, COM 3 Channel selection bit 1
11	4D0	Input	TTL, COM 4 Channel selection bit 0
12	4D1	Input	TTL, COM 4 Channel selection bit 1
13	1S0	Output	TTL, COM 1 Switch status output bit 0
14	1S1	Output	TTL, COM 1 Switch status output bit 1
15	2S0	Output	TTL, COM 2 Switch status output bit 0
16	2S1	Output	TTL, COM 2 Switch status output bit 1
17	3S0	Output	TTL, COM 3 Switch status output bit 0
18	3S1	Output	TTL, COM 3 Switch status output bit 1
19	4S0	Output	TTL, COM 4 Switch status output bit 0
20	4S1	Output	TTL, COM 4 Switch status output bit 1

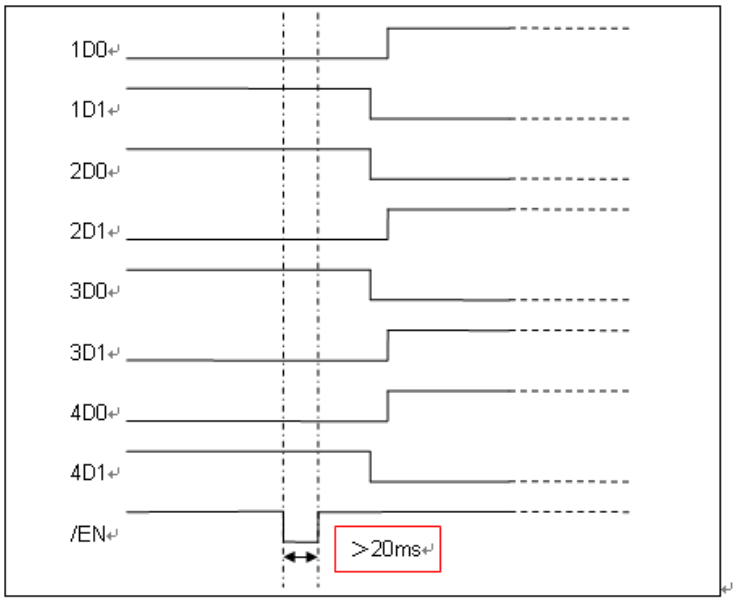
Switch Status

Input		Active Channel				Output
/EN	1D1,1D0_2D1,2D0_ 3D1,3D0_4D1,4D0					1S1,1S0_2S1,2S0_ 3S1,3S0_4S1,4S0
0	00_01_10_11	COM 1→1	COM 2→2	COM 3→3	COM 4→4	00_01_10_11
	00_01_11_10			COM 3→4	COM 4→3	00_01_11_10
	00_10_01_11		COM 2→3	COM 3→2	COM 4→4	00_10_01_11
	00_10_11_01			COM 3→4	COM 4→2	00_10_11_01
	00_11_01_10		COM 2→4	COM 3→2	COM 4→3	00_11_01_10
	00_11_10_01			COM 3→3	COM 4→2	00_11_10_01
	01_00_10_11	COM 1→2	COM 2→1	COM 3→3	COM 4→4	01_00_10_11
	01_00_11_10			COM 3→4	COM 4→3	01_00_11_10
	01_10_00_11		COM 2→3	COM 3→1	COM 4→4	01_10_00_11
	01_10_11_00			COM 3→4	COM 4→1	01_10_11_00
	01_11_00_10		COM 2→4	COM 3→1	COM 4→3	01_11_00_10
	01_11_10_00			COM 3→3	COM 4→1	01_11_10_00
	10_00_01_11	COM 1→3	COM 2→1	COM 3→2	COM 4→4	10_00_01_11
	10_00_11_01			COM 3→4	COM 4→2	10_00_11_01
	10_01_00_11		COM 2→2	COM 3→1	COM 4→4	10_01_00_11
	10_01_11_00			COM 3→4	COM 4→1	10_01_11_00
	10_11_00_01		COM 2→4	COM 3→1	COM 4→2	10_11_00_01
	10_11_01_00			COM 3→2	COM 4→1	10_11_01_00
	11_00_01_10	COM 1→4	COM 2→1	COM 3→2	COM 4→3	11_00_01_10
	11_00_10_01			COM 3→3	COM 4→2	11_00_10_01
	11_01_00_10		COM 2→2	COM 3→1	COM 4→3	11_01_00_10
	11_01_10_00			COM 3→3	COM 4→1	11_01_10_00
	11_10_00_01		COM 2→3	COM 3→1	COM 4→2	11_10_00_01
	11_10_01_00			COM 3→2	COM 4→1	11_10_01_00
1	x	Hold				Hold

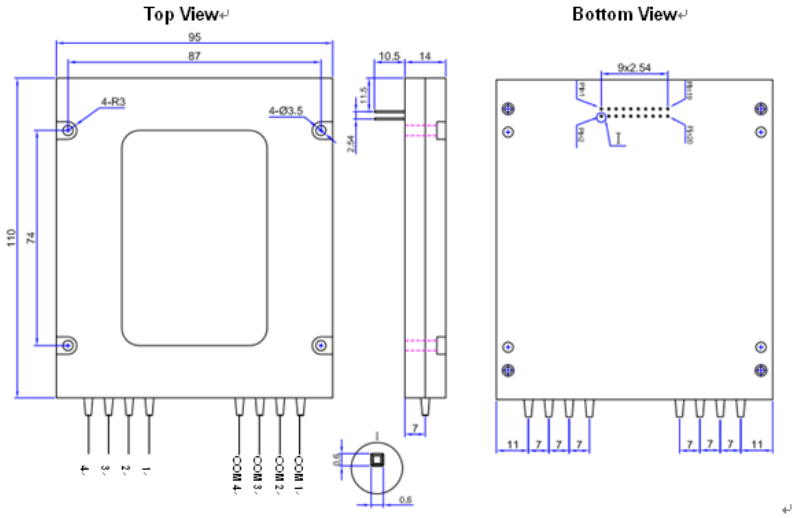
Optical Route



Timing Diagram



Dimension



Ordering Information: FSW-4×4-A-B-C-D-E-F

A	B	C	D	E	F
Fiber Type	Switch Type	Test Wavelength	Tube Type	Fiber Length (Include connector)	Connector
SM: SM, 9/125 M5:MM, 50/125 M6:MM, 62.5/125 X: Others	L: Latching X: Others	850: 850nm 1310: 1310nm 1550: 1550nm 1310/1550:1310/1550nm X:Others	90:900um X: Others	05: 0.5m±5cm 10: 1.0m±5cm 15: 1.5m±5cm X: Others	OO:None FP: FC/PC FA: FC/APC SP: SC/PC SA: SC/APC STP: ST/PC STA: ST/APC LP: LC/PC LA: LC/APC X: Others