

1x8T 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-1x8T 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-1x8T	
Wavelength Range	nm	850±40 / 1300±40	1260 ~ 1650
Test Wavelength	nm	850 / 1300	1310 / 1550
Insertion Loss	dB	Typ: 1.3 Max: 1.5	
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	
Durability	Cycles	≥ 10 Million	
Switching Time	ms	≤8	
Optical Power	mW	≤500	
Operating Temperature	℃	-20 ~ +70	
Storage Temperature	℃	-40 ~ +85	
Relative Humidity	%	5 ~ 95	
Dimension	mm	(L)86×(W)80×(H)16 ±0.2	

Power Supply Requirement

Parameters	Min	Typ	Max	Unit
DC voltage supply (5V)	4.75	5	5.25	V
DC voltage supply (3.3V)	3.14	3.3	3.45	V
DC current supply (5V)			250	mA
DC current supply (3.3V)			100	mA

Pin Configurations

Pin No.	Signal Name	I / O	Description
1	VCC1	Input	5.0±5% VDC Switch Power Supply
2	AGND	Input	Analog ground
3	D0	Input	LVTTL, Channel selection bit 0
4	D1	Input	LVTTL, Channel selection bit 1
5	D2	Input	LVTTL, Channel selection bit 2
6	Start	Input	LVTTL, Start strobe (Negative transition trigger)
7	Ready	Output	LVTTL, Ready (High=Not ready, Low=Ready)
8	Error	Output	LVTTL, Error (High=No error, Low=Error)
9	DGND	Input	Digital (CMOS) ground
10	VCC2	Input	+3.3(3.14~3.45)V CMOS Power Supply (max. 100mA)
11	NA		
12	NA		
13	S0	Output	LVTTL, Switch status output bit 0
14	S1	Output	LVTTL, Switch status output bit 1
15	S2	Output	LVTTL, Switch status output bit 2
16	T0	Output	LVTTL, Module type definition
17	T1	Output	LVTTL, Module type definition
18	T2	Output	LVTTL, Module type definition

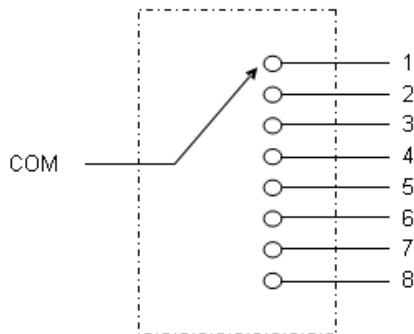
Switch Status

Input			Active Channel	Output		
D2	D1	D0		S2	S1	S0
0	0	0	COM → 1	0	0	0
0	0	1	COM → 2	0	0	1
0	1	0	COM → 3	0	1	0
0	1	1	COM → 4	0	1	1
1	0	0	COM → 5	1	0	0
1	0	1	COM → 6	1	0	1
1	1	0	COM → 7	1	1	0
1	1	1	COM → 8	1	1	1

Note: 1) Default setting: COM→1 .

2) Power-on status is as the same as latest power-off status. (Power-off status holding)

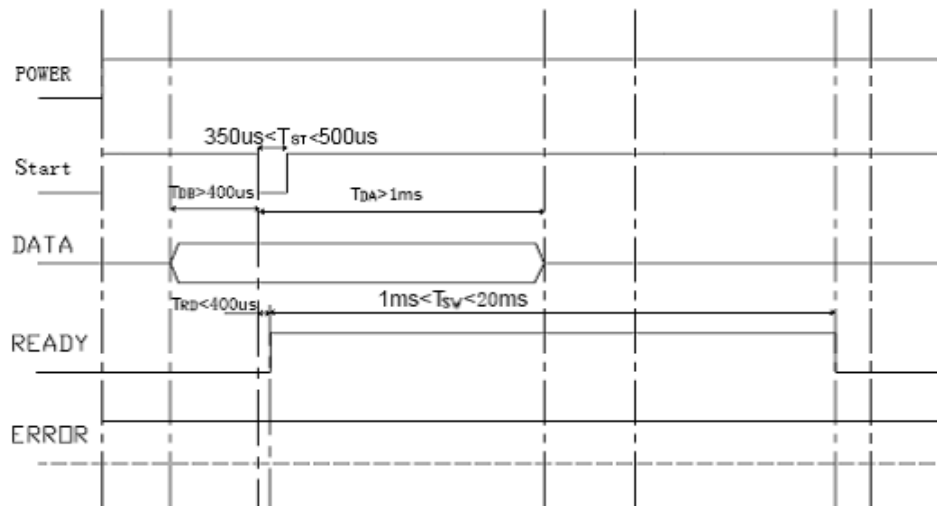
Optical Route



Switch Status

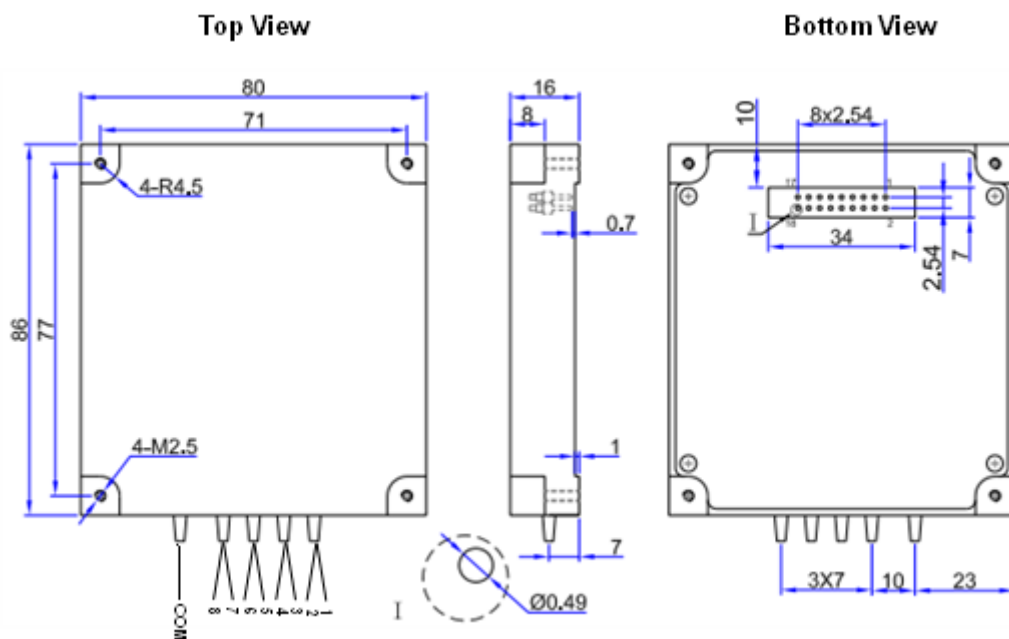
Module Type	T2	T1	T0
1×4 switch module	0	0	0
1×8 switch module	0	0	1
Other module	No-definition		

Timing Diagram



where T_{st} = Active Low Strobe time
 T_{db} =Data Valid time after START go low
 T_{da} =Data Valid time after START return to High
 Trd =Time from START LOW TO READY High
 T_{sw} =Range of Total Switching Time from START low to READY Low

Dimension



Ordering Information: FSW-1×8T-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	L:Latching	850: 850nm	90:900um X:	05: 0.5m±5cm	OO:None
M5:MM, 50/125	X:Others	1310: 1310nm	Others	10: 1.0m±5cm	FP: FC/PC
M6:MM, 62.5/125 X:		1550: 1550nm		15: 1.5m±5cm	FA: FC/APC
Others		1310/1550:1310/1550nm		X: Others	SP: SC/PC
		X:Others			SA: SC/APC
					STP: ST/PC
					STA: ST/APC
					LP: LC/PC
					LA: LC/APC
					X: Others