1x2 Solid-State SM Fiberoptic Switch (Two Sides)

ACP's SW Series switch connects optical channels by redirecting an incoming optical signal into a selected output fiber. This is achieved using patent pending non-mechanical proprietary configurations and activated via an electrical control signal. The solid-state operation offers ultra-high reliability and fast switching speed as well as bi-directional performance. The SW fiberoptic switches are true switching solutions for optical networking applications.
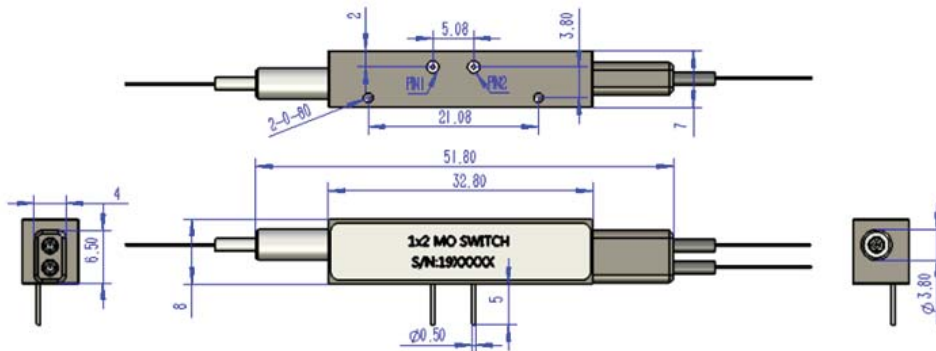
FEATURES

Fast Switching Speed

Ultra-High Reliability

Latching

Highly Repeatability

Low Cost

APPLICATION

Optical Network Protection/ Restoration

Optical Signal Routing

Configurable Optical Add/Drop

Transmitter & Receiver Protection

Network Test Systems

Instrumentation

PERFORMANCE SPECIFICATIONS

Parameter	Specifications	
Port Configuration	Unidirectional	Bidirectional
Operating Wavelength	1525 ~ 1565 or Custom Wavelengths	
Insertion Loss	≤ 1.0dB	≤ 1.1dB
Polarization Dependent Loss (PDL)	≤ 0.20dB	≤ 0.30dB
Polarization Mode Dispersion (PMD)	≤ 0.20ps	≤ 0.20ps
Channel Crosstalk	≥ 40dB	≥ 40dB
Return Loss	≥ 40dB	≥ 40dB
Repeatability	± 0.01dB	
Switching Speed (Regular)	50 ~ 200us	
Switching Speed (Ultra-fast)	5 ~ 20us	
Durability (Cycles) (Regular)	≥100 Billion	
Durability (Cycles) (Ultra-fast)	≥1,000 Billion	
Optical Power	≤ 500mW	
Operating Temperature	-5 to +70°C	
Storage Temperature	- 40 to +85°C	
Package Dimensions (LxWxH)	32.8x8x7mm (Including end cap 51.8x8x7mm)	

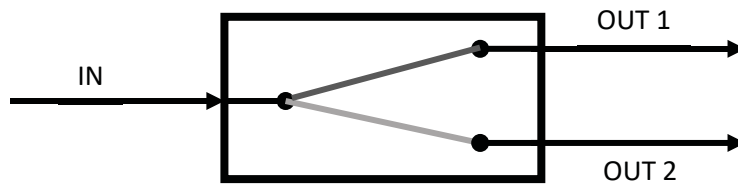All values referenced are without connector.

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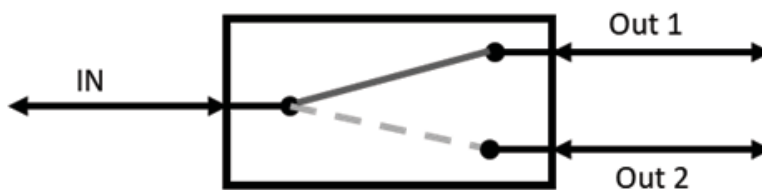
MECHANICAL DIMENSIONS

PORT CONFIGURATIONS

Unidirectional

Bidirectional

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OPTICAL PATH AND ELECTRICAL PIN CONFIGURATION

Unidirectional Configuration		
Pin 1	Pin 2	Optical Path
1 (Voltage = Vcc)	0 (Voltage = GND)	IN → OUT 1
0 (Voltage = GND)	1 (Voltage = Vcc)	IN → OUT 2

Bidirectional Configuration		
Pin 1	Pin 2	Optical Path
1 (Voltage = Vcc)	0 (Voltage = GND)	IN ↔ OUT 1
0 (Voltage = GND)	1 (Voltage = Vcc)	IN ↔ OUT 2

ELECTRICAL SPECIFICATIONS

Parameters	Unit	Specifications	
		Regular	Ultra-fast
Switching Speed	us	50 ~ 200	5 ~ 20
Switching Voltage (Vcc)	V	3 ± 5%	5 ~ 7.5
Switching Current	mA	≤ 100	≤ 350
Driving Mode		Voltage or Pulse	Pulse
Pulse Width (Typical)	us	1,000	200 [1]
Claim Frequency	Hz	≤ 800	≤ 3,000 [2]

1.   The recommended pulse width < 200µs. To operate 20µs operation a customer must apply 7V.

2.   When the switch is used for high-frequency (2 ~ 3KHz) switching, do not use it for a long time. If you want to use this for a long time at high frequency, it is recommended to use a cooling device.

ORDERING INFORMATION

SS									
Configuration	Switching Speed	Operating Wavelength	Port	Fiber Type*	Pigtail Style	Fiber Length	In Connector	Out Connector
U=Unidirectional	1=50 ~ 200us	55=1525 ~ 1565nm	102=1x2	2=SMF-28 Ultra	1=Bare fiber	05=0.5m	0 = None	0 = None
B=Bidirectional	2=5 ~ 20us	Custom		(G.657.A1)	2=900um	10=1.0m	1 = FC/APC	1 = FC/APC
				3=ClearCurve	loose tube	·	2 = FC/PC	2 = FC/PC
				ZBL(G.657.B3)		·	3 = SC/APC	3 = SC/APC
						·	4 = SC/PC	4 = SC/PC
						20=2.0m	5 = ST	5 = ST
							6 = LC/UPC	6 = LC/UPC
							7 = LC/APC	7 = LC/APC

*1=SMF-28(G.652) is available upon request.