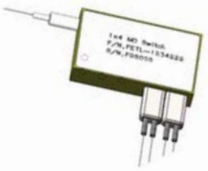
Compact 1x4 Solid-State Single-Mode Fiberoptic Switch



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.

PERFORMANCE SPECIFICATIONS

Parameter	Specifications	
Port Configuration	Unidirectional	Bidirectional
Operating Wavelength	1525 ~ 1565 or Custom Wavelengths	
Insertion Loss	≤ 1.5dB	≤ 1.8dB
Polarization Dependent Loss	≤ 0.25dB	≤ 0.30dB
Polarization Mode Dispersion	≤ 0.20ps	≤ 0.20ps
Channel Crosstalk	≥ 40dB	≥ 30dB
Return Loss	≥ 40dB	≥ 30dB
Repeatability	± 0.01dB	
Switching Speed (Regular)	50 ~ 200us	
Switching Speed (Ultra-fast)	2 ~ 20us	
Durability (Cycles)	≥1,000 Billion	
Optical Power	≤ 500 mW	
Operating Temperature	-5 to +70°C	
Storage Temperature	- 40 to +85°C	
Package Dimensions (LxWxH)	37x21x7.5	

All values referenced are without connector.

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

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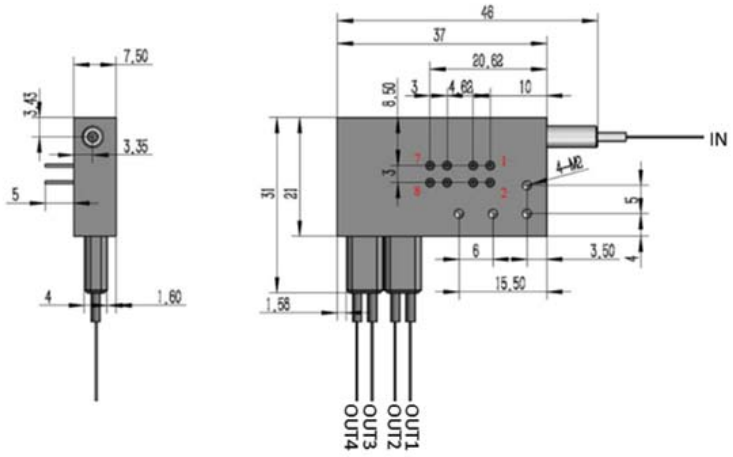
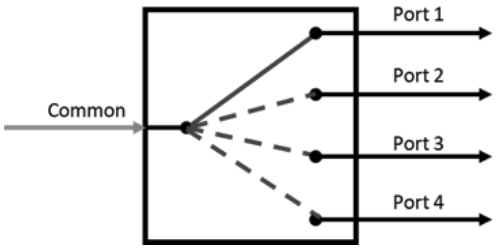
MECHANICAL DIMENSIONS

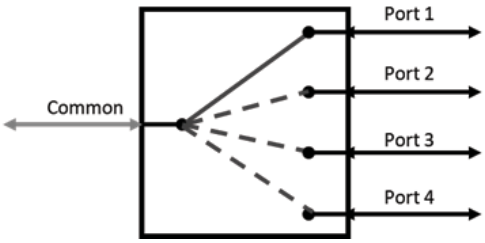


PORT CONFIGURATIONS

Unidirectional



Bidirectional



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OPTICAL PATH AND ELECTRICAL PIN CONFIGURATION

Unidirectional Configuration								
Optical Path	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
IN → OUT 1	+	-	+	-	N/A	N/A	N/A	N/A
IN → OUT 2	-	+	-	+	N/A	N/A	N/A	N/A
IN → OUT 3	+	-	-	+	N/A	N/A	N/A	N/A
IN → OUT 4	-	+	+	-	N/A	N/A	N/A	N/A

Bidirectional Configuration								
Optical Path	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
IN ↔ OUT 1	+	-	+	-	N/A	N/A	N/A	N/A
IN ↔ OUT 2	-	+	-	+	N/A	N/A	N/A	N/A
IN ↔ OUT 3	+	-	-	+	N/A	N/A	N/A	N/A
IN ↔ OUT 4	-	+	+	-	N/A	N/A	N/A	N/A

ELECTRICAL SPECIFICATIONS

Parameters	Unit	Specifications	
		Regular	Ultra-fast
Switching Speed *	us	50 ~ 200	2 ~ 20 (Typ. :5)
Switching Voltage (Vcc)	V	3 ± 5%	3 ~ 7.5
Switching Current	mA	≤ 100	≤ 350
Driving Mode		Voltage or Pulse Driving	Pulse Driving
Pulse Width (Typical)	us	≤ 500 (Typ. : 300)	≤ 20
Claim Frequency	Hz	≤ 1,000	≤ 3,500

* Other switching speed is also available upon request.

ORDERING INFORMATION

SS

Configuration	Switching Speed	Operating Wavelength	Port	Fiber Type	Pigtail Style	Fiber Length	In Connector	Out Connector
U=Unidirectional B=Bidirectional	1=50 ~ 200us 2=2 ~ 20us	55=1525 ~ 1565nm Custom	104=1x4	2=SMF-28 Ultra (G.657.A1) 3=ClearCurve ZBL(G.657.B3)	1=Bare fiber 2=900um loose tube	05=0.5m 10=1.0m · · · 20=2.0m	0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC/UPC 7=LC/APC	0=None 1=FC/APC 2=FC/PC 3=SC/APC 4=SC/PC 5=ST 6=LC/UPC 7=LC/APC

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