



## 1 × 4 MEMS Switch (MEMS Switch Series)

Rev 11B

### Description

AFR's MEMS Optical Switch is based on an electrostatic driven micro-electro-mechanical-system (MEMS) chip. The MEMS chip consists of a tilting mirror to change light coupling between input and output fibers. The components are characterized with low insertion loss, high return loss, excellent environmental stability and reliability. The optical switch has been widely used in fiber optics communication equipment, fiber instruments, and fiber sensing to switch channels.

### Key Features

- Durability and Reliability
- Compact Size
- Fast Switching Time

### Applications

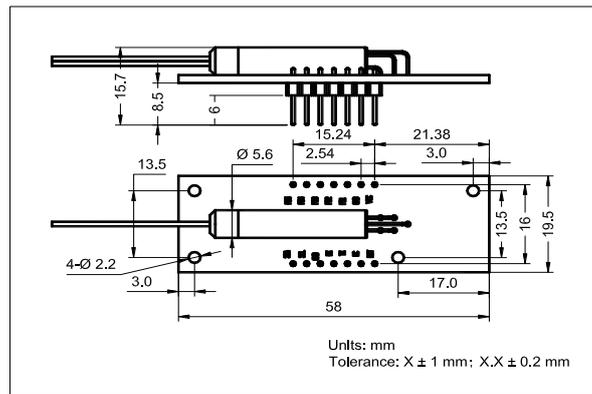
- Fiber Optics Communication
- Fiber Instruments
- Fiber Sensing
- Incoherent Wind Lidar

### Specifications

Parameter	Unit	Value
Operating Wavelength Range	nm	1530 - 1570
Max. Insertion Loss	dB	1.0
Min. Channel Crosstalk	dB	50
Repeatability	dB	± 0.02
Max. Polarization Dependence Loss	dB	0.1
Max. Polarization Mode Dispersion	ps	0.1
Drive Protocol	-	TTL
Min. Return Loss	dB	50
Max. Switch Time	ms	20
Drive Voltage	V	5~12
Min. Durability	cycle	1 billion
Max. Operating Power Handling	mW	500
Max. Temperature Dependence Loss	dB	0.3
Max. Wavelength Dependence Loss	dB	0.3
Switch Type	-	Non-Latching
Fiber Type	-	SMF-28 Fiber
Operating Temperature	°C	- 5 to + 70
Storage Temperature	°C	- 40 to + 85
Package Dimensions	mm	20 × 58 × 16

<sup>1</sup>IL is 0.3 dB higher, RL is 5 dB lower, and ER is 2 dB lower for each connector added. Connector key is aligned to slow axis.

## Package Dimensions



## Ordering Information

### MEMSSW-①-②-③-④-⑤

①: Wavelength 15 - 1550 nm	②: SW Type 4 - 1 × 4	③: Connector Type 1 - FC/UPC 2 - FC/APC 3 - SC/UPC 4 - SC/APC N - None S - Specify	④: Fiber Jacket B - 250 µm Bare Fiber S - Specify	⑤: Fiber Length Q - 0.75 m S - Specify
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