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CrystaLatch™ Fiber Optic Polarization Switch

Product Description

The CL Series polarization switch can quickly switch the incoming SOP between two orthogonal polarization states (SOPs). This is achieved using patented non-mechanical configurations and activated via an electrical control signal. Latching operation preserves the selected SOP after the drive signal has been removed. The all solid state CL polarization fiber optic switch features low insertion loss, high extinction ratio, fast switching, and extremely high reliability and repeatability. The input is PM fiber, the output could be either PM or SM fiber. For PM fiber, the polarizations is aligned with slow axis. Electronic driver is available for this series of switches.



Performance Specifications

Polarization Switch	Min	Typical	Max	Unit
Operating Wavelength	1290	1310	1330	nm
	1530	1550	1560	
Durability	10 ¹⁴			cycles
SOP Tolerance		±1.0 ^[1]	± 2.5 ^[2]	Degree
Insertion Loss		0.45	0.7	dB
Return Loss	50			dB
Response Time		20	50	µs
Operation Temperature		0-70		°C

[1]. Measured at room temperature
 [2]. It may be increased at temperature other than room temperature.

Features

- No moving part
- Fast switching
- Low IL
- Miniature Size

Applications

- Test instrument
- Sensor



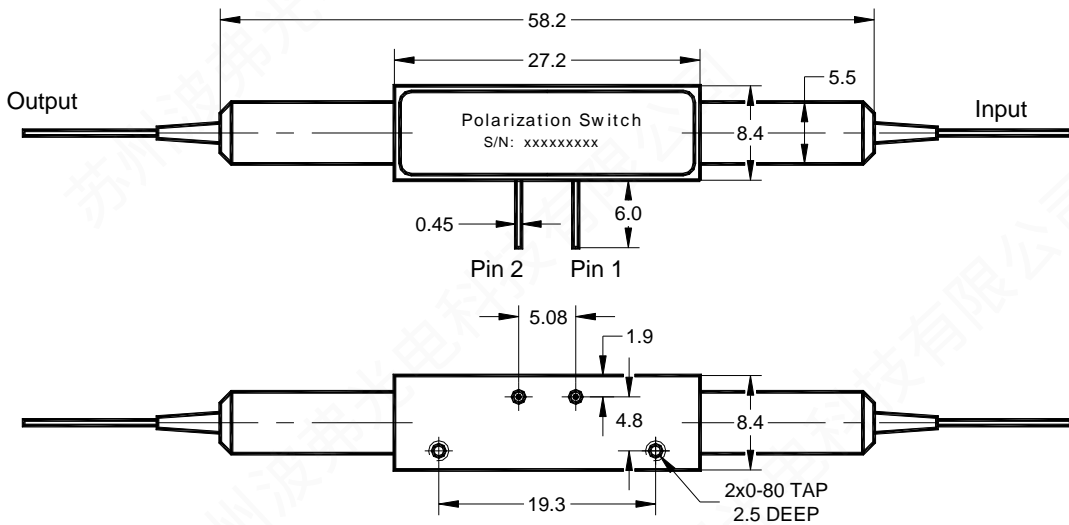
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Electrical Driving Information

The polarization switch is actuated by applying a voltage pulse. Applying one polarity pulse, The output light beam polarization is one status. Applying a reversed polarity pulse, The output light beam polarization is rotated by 90 degrees. The status is kept until the next pulse.

Parameter	Minimum	Typical	Maximum	Unit
Drive Voltage*	2.3	2.5	2.7*	V
Drive Current	110	140	195	mA
Pulse Duration	0.2	0.3	0.5	ms

Mechanical Dimensions (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information

CLPS-	Type	Configuration	Package	Wavelength	Input Fiber	Output Fiber	Fiber Length	Connector
1 1	1	1	1	1550nm = 1 1310nm = 3	Panda PM=1 Special=0	Panda PM=1 SMF-28 =2 Special=0	0.25m=1 0.5m=2 1.0 m=3 Special=0	None=1 FC/PC=2 FC/APC= 3 SC/PC=4 SC/APC=5 LC/APC=7 Special=0