

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 | |
| 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



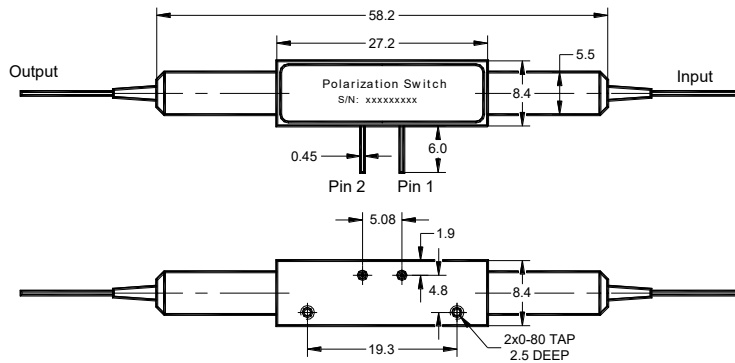
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Electrical Driving Information

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)



Ordering Information

| CLPS- | 1 | 1 | 1 | 1 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|-------|---------------|---------|--------------------------|--------------------------------------|--|---|---|--------------------------|
| Type | Configuration | Package | Wavelength | Fiber Type | Fiber Length | Connector | | |
| | | | 1550nm = 1 1310nm = 3 | Panda PM=1 For input Special=0 | Panda PM=1 SMF-28 =2 for output 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 ST/PC=6 LC/APC=7 Special=0 | |

