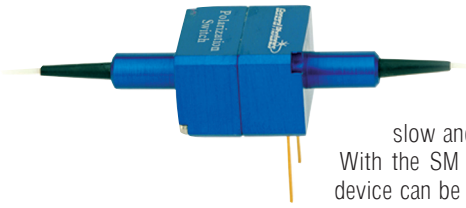
Polarization Submodules

Polarization Switch – PolaSwitch™



General Photonics' all solid-state polarization switch can quickly and repeatably rotate the SOP of incoming light by a fixed angle, either 45 or 90 degrees. Both single mode and PM fiber pigtailed versions are available. With the PM option, the device functions as a TE to TM converter, switching the SOP between being aligned with the slow and fast axes of the PM fiber, or between the slow axis and 45 degrees from the slow axis. With the SM option, the device simply rotates the polarization ellipse either 45 or 90 degrees. The device can be used for PMD monitoring, polarization modulation, polarization detection, and polarization metrology.

Specifications:

Operating Wavelength[1]	1550 ± 30 nm
Polarization Rotation (@1550 nm, 23 °C)	45 ± 0.5°, or 90 ± 0.5°
Polarization Rotation (All Wavelengths, All Temp.)	45 ± 5°, or 90 ± 5°
Rotation Angle Temperature Dependence	-0.1 degree/°C for 45° version -0.2 degrees/°C for 90° version
Insertion Loss	< 0.5 dB
Return Loss	> 55 dB
Switching Current	< 130 mA
Switching Voltage	5 V
Latching Current	~ 80 mA
Latching Voltage	2 – 3 V
Switching Time	100 µs typical
Extinction Ratio	> 18 dB for PM model
Operating Temperature	0 to 50 °C
Storage Temperature	-40 to 85 °C
Fiber Type	PM Panda, Corning SMF-28 or compatible
Dimensions	1.57" (L) x 0.69" (W) x 0.53" (H)

Note: Values are referenced without connectors.
1. Contact General Photonics about other wavelengths.

Features:

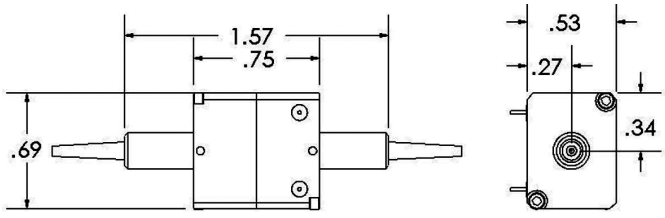
- Fast
- No moving parts
- Low insertion loss
- Compact

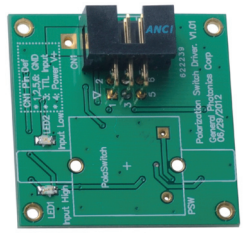
Applications:

- Polarization diversified detectors and sensors
- Polarization multiplexing
- Polarization metrology
- Polarization modulator
- Coherent communication
- PMD monitoring

Tech Info: p. 215
FAQ: p. 228

Dimensions (in inches):





Driver board available

Ordering Information:

PSW – 001 – □□ – □□ – □□□

- Polarization Rotation: 90 = 90° / 45 = 45°
- Fiber Type: SS = SM to SM / PP = PM to PM
- Connector Type: FC/PC, FC/APC or NC = no connectors / Others specify

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