

## Polarization Modulators

The PS-LN Polarization Rotators are integrated optics waveguide devices that switch the polarization state of an input light between two linear orthogonal output states at frequencies up to 10 GHz. Practically, the output light is transmitted on either the fast or slow axis of the output polarization maintaining fiber of the component, operating then as a TE to TM converter.

The PS-LN Rotators are based on a birefringent LiNbO<sub>3</sub> phase modulator whose waveguide is illuminated at 45 ° of its main axes. The input state of polarization (SOP) is thus split up in two orthogonal TE and TM polarization states. When an RF modulation signal is applied via the control electrodes, an optical path difference between the TE and TM components is produced resulting in a new state of polarization (SOP) for the output light. Ultimately, the phase modulation signal can be adjusted to provide a highly linear SOP on either axis of the output fiber. This polarization rotation provides an efficient means for high speed Polarization Switching or Polarization Scrambling.

	Wavelength	EO Bandwidth	$V_{\pi RF_1}$ & $RF_2@50$ kHz $/\sqrt{\pi DC_3}$	IL
PS-LN	1520-1620 nm	150 MHz, 5, 10 GHz	5.7 V / 17 V	< 6 dB

### Features:

- 1550 nm, 1300 nm
- Low Insertion Loss
- Low driving voltage

### Applications:

- Telecommunication PSK
- Lab use

