# Free Space Faraday Rotator and Isolator



Faraday Rotator is an optical device based on the Faraday effect. The linearly polarized light input can be rotated to specified angles, and the direction is only related to the internal magnetic field. Optical Isolator is made of three parts, an input polarizer, a Faraday rotator, and an output polarizer. It is an optical component which allows the transmission of light in only one direction. It is widely used for amplified lasers, mode-locked lasers and optical test instrumentation.

**Applications** 

Amplified laser Mode-locked laser

Semiconductor laser

Optical test instrumentation Optical parametric oscillator

#### **Key Features**

- High isolation
- Low insertion loss
- Various clear aperture
- Double escape ports
- Various wavelength options
- Output polarization states adjustable

#### Part Numbering Schema







### **Technical Specifications**

Product	Part No.	Wavelength	Clear Aperture	Rotation Angle @25°C	Extinction @25°C	Transmission @25°C	Damage Threshold @10ns	Package
Rotator	RL-ROT-1030-2.5	1030nm	2.5mm	45°±1°	> 30dB	> 95%	5J/cm <sup>2</sup>	3#
	RL-ROT-1030-5		5mm					
	RL-ROT-1064-2.5	1064nm	2.5mm					
	RL-ROT-1064-5		5mm				10J/cm <sup>2</sup>	

Product	Part No.	Wavelength	Clear Aperture	lsolation @25°C	Transmission @25°C	Polarizer	Damage Threshold @10ns	Package
Isolator	RL-ISO-1030-2.5	1030nm	2.5mm	>30dB	> 90%	PBS Cube	5J/cm <sup>2</sup>	3#
	RL-ISO-1030-5		5mm					
	RL-ISO-1064-2.5	1064nm	2.5mm					
	RL-ISO-1064-5		5mm					

## Mechanical Drawings (in mm)



3# rotator package



3# isolator package