

## 1850 nm 45° Faraday Rotato



### ● Product Description

Faraday rotator is a device that realizes precise non-reciprocal rotation of laser polarization. It provides non-reciprocal rotation while maintaining the linear polarization of the beam. In combination with a polarizer, it can block the return light in the optical path and realize a device that realizes precise non-reciprocal

rotation of laser polarization. Faraday rotators provide non-reciprocal rotation while maintaining the linear polarization of the light beam. When light passes through the Faraday rotator in a certain direction, the polarization state will rotate  $45^\circ$ ; when the light beam passes through the Faraday rotator in the opposite direction, the polarization state will rotate another  $45^\circ$  in the same direction relative to the magnetic field. Based on this principle, in combination with a polarizer, the return light in the optical path can be blocked. The Faraday rotator we provide is made of magneto-optical crystal with high Verdet constant and low absorption coefficient, with high reliability and small M2 degradation. Combined with high damage threshold technology, the average power of the product can reach 500W Max., with a wavelength range of 355 nm-4500 nm

- **Product features**

Rotate the polarization plane of incident light by  $45^\circ$ 、 High Wildeland constant magneto-optical crystal, low loss、 Can be used with a polarizer to block the return light in the optical path

- **Part Number**

MP-ROT-1850-B-5-45

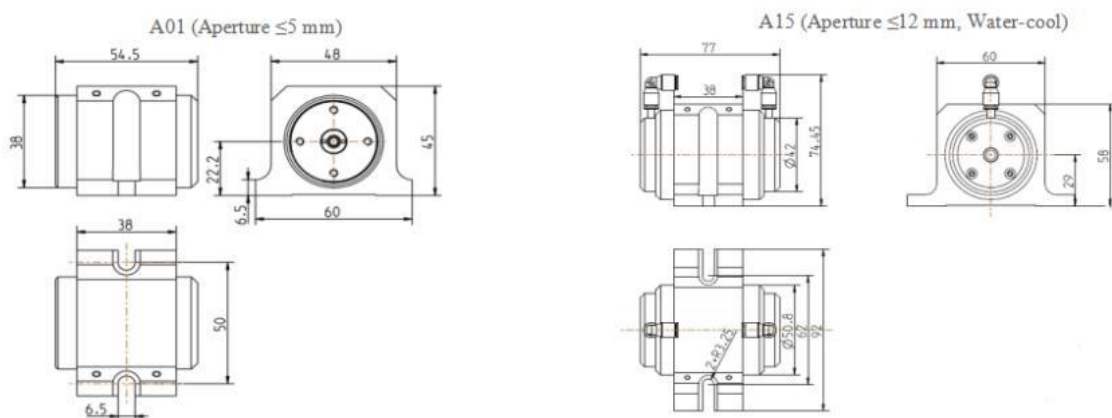
## ● Application area

Laser sensing system、 Ultrafast laser system、 OCT system、 Laser detection

## ● Core parameters

Wavelength	Rotation Angle	Clear Aperture
1850nm	45°	5mm

## ● Dimension Drawing



## ● General Parameters

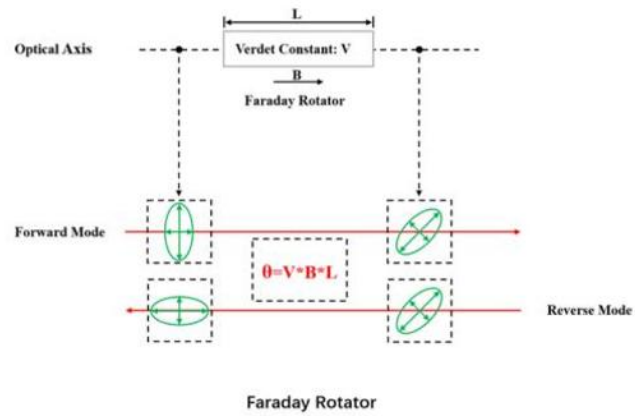
Wavelength	1850nm ± 10nm
Transmission	>98%
Rotation Angle	45° ± 2°

<b>Optical Power (Average)</b>	<b>1W</b>
<b>Clear Aperture</b>	<b>5 mm</b>
<b>Extinction Ratio</b>	<b>&gt;30dB</b>
<b>Operating Temperature</b>	<b>10-30°C</b>
<b>Storage Temperature</b>	<b>-10-60°C</b>

### Main Parameters:

Typical indicator reference					
Clear Aperature	Wavelength	Extinction Ratio	Rotation Angle	Withstand Power*	Transmittance
2-15 mm	355-1080 nm	> 30 dB	45 ± 0.5°	100 W	> 98 %
2-10 mm	1310-4500 nm	> 30 dB	45 ± 0.5°	100 W	> 98 %
15-20 mm	600-1080 nm	> 30 dB	45 ± 1°	500 W	> 98 %
<p>The operating temperature range of the product is 10°C-30°C. *Indicates the maximum average power that the product can withstand.</p>					

## Working Principle Diagram



Transmission curve:

