

## 45° 1064nm Crystalline Quartz Polarization Rotator



Crystalline Quartz Polarization Rotators

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⊖ 1 ⊕ **A\$630<sup>00</sup>**

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**General**

Polarization Rotator **Type:**

**Physical & Mechanical Properties**

>18.0 **Clear Aperture CA (mm):**

25.40 **Diameter (mm):**

**Length (mm):**

25.40

**Construction:**

Crystalline

**Parallelism (arcsec):**

<10

**Width (mm):**

12.00

**Rotational Accuracy:**

<5 arcmin

**Substrate Thickness (mm):**

7.13

## Optical Properties

**Coating:**

R<sub>avg</sub> <0.2% per surface

**Design Wavelength DWL (nm):**

1064

**Substrate:**

Crystalline Quartz

**Surface Quality:**

20-10

**Transmitted Wavefront, P-V:**

λ/8 @ 633nm

**Damage Threshold, By Design:**

>10 J/cm<sup>2</sup> @ 10ns

**Polarization Rotation:**

45° (clockwise)

## Threading & Mounting

**Mount Thickness (mm):**

12.0

**Mount:**

Black Anodized Aluminum

## Regulatory Compliance

**RoHS 2015:**

[Compliant](#)

**Certificate of Conformance:**

[View](#)

**Reach 247:**

[Compliant](#)

## Product Details

- Rotates Polarization by a Fixed Angle Regardless of Incident Polarization Angle
- Convenient Replacement of Half-Waveplate for Narrow Waveband Lasers
- 1064nm, 532nm, and 355nm Anti-Reflection Coatings Available in Both 45° and 90° Rotation Angles

Crystalline Quartz Polarization Rotators rotate the polarization plane of an incident beam by a fixed angle, regardless of the rotator's alignment relative to the beam's polarization. Polarization rotators are a good alternative to waveplates with regards to rotating polarization by a specific angle. They produce a rotation in polarization caused by the optical activity naturally present in quartz crystals being independent of the rotator's orientation around the optical axis. The Crystalline Quartz Polarization Rotators only need to be aligned perpendicular to the direction of propagation of light. Rotators with fixed 45° or 90° rotation at Nd:YAG wavelengths, mounted in a black anodized aluminum mount, are available.

## Custom

Edmund Optics offers comprehensive custom manufacturing services for optical and imaging components tailored to your specific application requirements. Whether in the prototyping phase or preparing for full-scale production, we provide flexible solutions to meet your needs. Our experienced engineers are here to assist—from concept to completion.

Our capabilities include:

- Custom dimensions, materials, coatings, and more
- High-precision surface quality and flatness
- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

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