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## Low Order Ultra High LDT Waveplate $\lambda/2$ 1064nm 50.8mm Dia



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⊖ 1 ⊕ £2,184.<sup>00</sup>

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### Product Downloads

### General

Crystalline Waveplate **Type:**

### Physical & Mechanical Properties

>45 **Clear Aperture CA (mm):**

50.80 +0.00/-0.25 **Diameter (mm):**

Air-Spaced **Construction:**

Parallelism (arcsec):

<3

## Optical Properties

Coating:

$R_{avg} < 0.1\%$  on each surface

Design Wavelength DWL (nm):

1064

Substrate:

Crystal Quartz

Retardance:

$\lambda/2$

Surface Quality:

20-10

Transmitted Wavefront, P-V:

$< \lambda/10$  @ 632.8mm over 38.1mm

Retardance Tolerance:

$< \lambda/500$  @ 20C

Damage Threshold, By Design:

$> 35 \text{ J/cm}^2$  @ 1064nm; 10ns; 10 Hz

## Threading & Mounting

Mount Thickness (mm):

6.00 +0.00/-0.25

## Regulatory Compliance

RoHS 2015:

Compliant

Certificate of Conformance:

[View](#)

Reach 247:

Compliant

## Product Details

- High Laser Damage Threshold at Common Laser Processing Wavelengths
- $\lambda/500$  Retardance Tolerance
- Ideal for Material Machining Applications

Precision Waveplates for Laser Processing offer an exceptional damage threshold making them ideal for material processing and other high energy applications. These waveplates feature a premium retardance tolerance of  $\lambda/500$ , enabling their use in sensitive applications requiring high precision and stability. Designed as zero order, these waveplates allow for a greater than  $\pm 1\%$  wavelength deviation due to their increased bandwidth and lower sensitivity to temperature change. Precision Waveplates for Laser Processing are available in 25.4 and 50.8mm diameters and are designed for commonly used material machining wavelengths of 532, 1030, and 1064nm. The waveplates designed for use with Nd:YAG laser wavelengths feature damage thresholds up to  $35 \text{ J/cm}^2$  @ 1064nm with 10ns pulses while the waveplates designed for Yb:YAG feature damage thresholds up to  $0.5 \text{ J/cm}^2$  @ 1030 nm with 200fs pulses.