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12.7mm Dia. 689nm $\lambda/2$ Quartz Waveplate



Stock #71-039 [CONTACT US](#)

- 1 + £384.⁸⁰

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Volume Pricing

| | |
|------------|-------------------------------|
| Qty 1-5 | £384.80 each |
| Qty 6+ | £268.00 each |
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i Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Crystalline Waveplate **Type:**

Physical & Mechanical Properties

>8.00 **Clear Aperture CA (mm):**

12.70 +0.0/-0.2 **Diameter (mm):**

Optical Properties

Design Wavelength DWL (nm):
689

Substrate:
Crystalline Quartz

Retardance:
 $\lambda/2$

Surface Quality:
20-10

Retardance Tolerance:
 $\lambda/300 @ 20C$

Transmitted Wavefront Distortion (RMS):
 $\lambda/10 @ 632.8nm$

Coating Specification:
R<0.2% @ 689nm on each surface

Retardance Order:
Zero

Coating Type:
Anti-Reflection

Threading & Mounting

Mount Thickness (mm):
6.00 ±0.2

Mount:
Anodized Aluminium

Regulatory Compliance

RoHS 2015:
[Compliant](#)

Certificate of Conformance:
[View](#)

Reach 247:
[Compliant](#)

Product Details

- Ideal for Trapped-Ion and Neutral Atom Applications
- Range of Application-Specific Wavelengths from UV to NIR
- 12.7 and 25.4mm Diameters for Easy Integration

Half Waveplates for Quantum Computing are ideal for the manipulation of polarization states in trapped ion, linear optical, and neutral atom quantum computing, as well as quantum cryptography and communication applications. These waveplates are available in a range of commonly-used, application-specific wavelengths across the UV to NIR spectrum covering the main wavelengths of commonly used ions (Ytterbium/Strontium/Calcium), and offer a retardance of $\lambda/2$ and a retardance accuracy of $\lambda/200$.

Depending on wavelength, these waveplates feature either a first or zero-order construction for a low temperature-sensitivity, and are AR-coated for maximum transmission at the design wavelength to ensure optimal performance with low light signals. Half Waveplates for Quantum Computing are housed in a black, anodized aluminum mount and are available in both a 1" and more compact 1/2" size for easy integration into space sensitive systems. Polarizing Cube Beamsplitters for Quantum Computing are also available, and custom wavelengths are available for both.

Technical Information

| Wavelength (nm) | Application Type |
|-----------------|------------------|
| 366 | Trapped Ion |
| 392 | Trapped Ion |
| 435 | Trapped Ion |
| 495 | Trapped Ion |
| 679 | Neutral Atom |
| 689 | Neutral Atom |
| 795 | Neutral Atom |
| 813 | Neutral Atom |
| 815 | Neutral Atom |

