

25.4mm Clear Aperture, 2 Arcsec, Aluminum Retroreflector



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A\$1,896^{.00}

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General

Type:

Retroreflector

Physical & Mechanical Properties

Clear Aperture CA (mm):

25.4

Diameter (mm):

41.30

Dimensional Tolerance (mm):

±1.6

Optical Properties

Beam Deviation (arcsec): 2.00

Enhanced Aluminum (450-650nm) **Coating:**

Exiting Wavefront Accuracy:
0.25λ

BOROFLOAT® Substrate: ☐

80-50 **Surface Quality:**

Image Orientation:
Left-Handed

180 Ray Deviation (°):

Wavelength Range (nm):
400 - 700

Threading & Mounting

Mounting Threads:
(2) 1/4-20, M6 x 1.0

Regulatory Compliance

RoHS 2015:
Compliant

REACH 201:

Compliant

Certificate of Conformance:

Product Details

- Incident Light is Reflected Back to the Source
- Hollow Lightweight Design
- No Material Absorption or Chromatic Aberration

Hollow Retroreflectors are constructed of three first surface mirrors assembled into a corner cube. This produces a lightweight "hollow corner cube" that is totally insensitive to position and movement. The result is that parallel incident light is reflected back to the source with great accuracy, regardless of the angle of incidence. Since the optical path is in air, this configuration eliminates material absorption and chromatic aberrations present in solid glass prism-type retroreflectors. The larger housings feature a variety of mounting holes on the back plate.

The specified beam deviation value of each Hollow Retroreflector is the maximum deviation from parallelism of any single return beam from any of the six sub-apertures, when the retroreflector is fully illuminated. Exiting wavefront is the resultant peak-to-valley wavefront deformation from a fully illuminated retroreflector, which is listed in factors of λ (where $\lambda = 633\text{nm}$). The unique, patented cushion mounting makes these Hollow Retroreflectors extremely resistant to shock.

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Technical Information

Clear Aperture (CA)	Diameter	L1	L2	A	B	C
6.4mm	8.1mm	8.1mm *	—	—	—	—
12.7mm	14.6mm	19.1mm *	—	—	—	M3 x 0.5
25.4mm	41.3mm	36.5mm	49.2mm	44.5mm	50.8mm	1/4-20
50.8mm	76.2mm	62.0mm	79.5mm	78.7mm	94.2mm	1/4-20 **
63.5mm	89.4mm	61.5mm	79.0mm	92.3mm	101.6mm	1/4-20 **
127.0mm	166.7mm	125.5mm	150.8mm	171.5mm	221.9mm	1/4-20 **

Hollow Retroreflectors

The technical drawings illustrate the dimensions and features of the hollow retroreflectors. The left drawing is a side view showing a square block with a central circular retroreflector. Dimensions include Dia. (outer diameter), CA (clear aperture), L1 (length to center of retroreflector), L2 (total length), and mounting holes (M6 x 1.0 Mtg. Hole, C Mtg. Hole, 1/4-20 Mtg. Hole). The right drawing is a top view showing a square block with four thru holes (7.4mm Dia.) and a central circular retroreflector. Dimensions include A (side length) and B (distance between thru holes).

*Does not have back plate
**Additional 8 mounting holes on 50.8mm and larger Dia: (4) M6 x 1.0 at 90° and (4) 1/4-20 at 90° on 2" Bolt Circle

Coating Curves

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