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**TECHSPEC® 12.7mm Silver and NIR II Coated, Corner Cube Prism**



N-BK7 Corner Cube Retroreflectors with Black Overpaint

Stock **#12-489** **20+ In Stock**

⊖ 1 ⊕ €289<sup>00</sup>

**ADD TO CART**

Volume Pricing	
Qty 1-5	€289,00 each
Qty 6-25	€231,00 each
Qty 26-49	€217,00 each
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ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

**General**

Retroreflector **Type:**

Black Overpaint is 30-60µm Thick **Note:**

**Physical & Mechanical Properties**

Diameter (mm):

12.70 +0.0/-0.1

Height (mm):

10.16

Bevel:

Protective as needed

Clear Aperture (%):

90

Height Tolerance (mm):

±0.25

## Optical Properties

Beam Deviation (arcsec):

5

Coating:

S1 Silver with protective overcoat (black overpaint) & S2 NIR II

Substrate:

N-BK7

Surface Quality:

60-40

Image Orientation:

Left-Handed

Coating Specification:

Reflective Surfaces:  $R_{abs} > 97\%$  FROM400 - 2500nm @ 0° AOI  
 $R_{avg} > 98\%$  FROM400 - 2500nm @ 0° AOI  
Entrance:  $R_{abs} \leq 1.5\%$  @ 750 - 800nm,  $R_{abs} \leq 1.0\%$  @ 800 - 1550nm,  $R_{avg} \leq 0.7\%$  @ 750 - 1550nm

Ray Deviation (°):

180

Wavelength Range (nm):

750 - 1550

Damage Threshold, By Design:

Entrance: 8 J/cm<sup>2</sup> @ 1064nm, 10ns  
Reflective Surfaces: 0.5 J/cm<sup>2</sup> @ 1064nm, 10ns

Power (fringes) @ 632.8nm:

0.25

Irregularity (fringes) @ 632.8nm:

0.25

## Regulatory Compliance

RoHS 2015:

Compliant

Reach 219:

Compliant

Certificate of Conformance:

[View](#)

## Need different specs or modifications?

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

Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

## Product Details

- Incident Light is Reflected Back to the Source
- Down to 3 Arcsecond Beam Deviation
- Useful for Surveying and Alignment
- Also Available [Mounted](#)

TECHSPEC® N-BK7 Corner Cube Retroreflectors are designed to reflect any ray or beam entering the prism face, regardless of the orientation of the prism, back onto itself. A mirror will do that only at the normal incidence. As a result, corner cube retroreflectors are useful where precision alignment is impossible or time-consuming. TECHSPEC® N-BK7 Corner Cube Retroreflectors are available with the dihedral surfaces either uncoated or coated with silver. The silver coating provides a larger acceptance angle while the uncoated option, which relies on total internal reflection, provides optimum reflectivity. This coating is covered by a protective black overpaint. Please note, this protective coat increases the diameter of the corner cube retroreflector by 30-60 µm. The input face is available uncoated or coated with an antireflection coating optimized for either visible wavelengths or near infrared wavelengths, including 1064nm and 1550nm.

# LASER OPTICS MADE BY EDMUND OPTICS®

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N-BK7 Corner Cube Retroreflectors provide high-reflectance cube performance with total internal reflection. Ideal for laser alignment, metrology, and interferometry applications requiring consistent optical return paths. Compact, durable, and designed for maximum angular accuracy without the need for precise alignment.

## FAQ(s)

**What is the benefit of N-BK7 glass in this cube reflector?**

N-BK7 offers excellent transmission in the visible to near-infrared range and high durability, making it suitable for a wide range of environments.

**Do these retroreflectors require alignment?**

No—corner cubes automatically return beams parallel to the input, eliminating the need for precise alignment.

**Can these be used in laser-based applications?**

Yes, they are commonly used in laser interferometry, alignment systems, and metrology due to their consistent beam return path.

**Are AR coatings available?**

Yes, Edmund Optics offers both uncoated and broadband AR-coated options to enhance performance across various wavelengths.

## Technical Information

A (mm)	B (mm)	Stock No. Uncoated	Stock No. Silver Coated	Stock No. Silver and VIS 0° Coated	Stock No. Silver and NIR II Coated
7.16	6.1	#65-250	#43-305	#48-605	#12-488
12.7	10.16	#43-296	#45-202	#48-606	#12-489
25.4	19.05	#43-297	#45-187	#48-607	#12-490
38.1	29.21	#43-298	#45-189	#48-608	N/A
50.8	38.1	#43-299	#45-191	#48-609	N/A
63.5	48.26	#43-300	#48-593	#48-616	N/A
76.2	57.15	#43-301	#48-594	#48-617	N/A

