

[See all 20 Products in Family](#)

TECHSPEC® 50mm, MgF₂ Coated, High Tolerance Penta Prism



Stock #47-459 **20+ In Stock**

⊖ 1 ⊕ **\$463⁰⁰**

ADD TO CART

Volume Pricing	
Qty 1-5	\$463.40 each
Qty 6-25	\$369.60 each
Qty 26-49	\$347.20 each
Need More?	Request Quote

Product Downloads

General

Penta Prism **Type:**

Physical & Mechanical Properties

50.00 **Length (mm):**

±0.10 **Dimensional Tolerance (mm):**

Protective as needed **Bevel:**

50.00 **Length of Legs (mm):**

Optical Properties

MgF₂ & Aluminized **Coating:**

N-BK7 **Substrate:**

40-20 **Surface Quality:**

Right-Handed **Image Orientation:**

Coating Specification:
Entrance/Exit Faces: R_{avg} ≤ 1.75% @ 400 - 700nm
Reflecting Surfaces: Aluminized, Inconel & Black Paint

90 **Ray Deviation (°):**

400 - 700 **Wavelength Range (nm):**

Damage Threshold, By Design:
Entrance & Exit Faces: 10 J/cm² @ 532nm, 10ns
Reflecting Surfaces: 0.3 J/cm² @ 532 & 1064nm, 10ns

±1 **Beam Deviation Tolerance (arcmin):**

1.00 **Power (fringes) @ 632.8nm:**

0.25 **Irregularity (fringes) @ 632.8nm:**

Regulatory Compliance

Compliant **RoHS 2015:**

Compliant **Reach 223:**

View **Certificate of Conformance:**

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

- Ray Deviation of 90°
- Right Handed Image
- Optical Tool for Defining a Right Angle
- Additional [Penta Prism](#) Options Available

TECHSPEC® N-BK7 Penta Prisms are five-sided prisms featuring a ray deviation of 90° and a right-handed image. The reflecting surfaces are aluminized. Slight movement of the prism does not affect the true right angle at which light rays are reflected, making a penta prism the ideal optical tool for defining a right angle in an optical system. TECHSPEC® N-BK7 Penta Prisms are made from precision N-BK7 for use in a variety of visible light applications. These prisms are offered with a VIS 0° or MgF₂ coating, in a variety of sizes.

Technical Information



Penta Prism Ray Path



Penta Prism Tunnel Diagram

Stock No.	Coating	Dimensions	
		A	B
#85-159	MS 0°	0.50	0.60
#85-160	MS 0°	1.00	1.20
#45-112	MgF ₂	5.00	6.10
#48-595	MS 0°		
#32-030	MgF ₂	10.00	11.95
#48-596	MS 0°		
#43-502	MgF ₂	15.00	15.96
#48-597	MS 0°		
#31-051	MgF ₂	20.00	21.65
#48-598	MS 0°		
#42-779	MgF ₂	25.00	27.90
#47-458	MgF ₂		
#48-599	MS 0°	30.00	32.47
#45-073	MgF ₂		
#48-600	MS 0°	35.00	37.88
#45-402	MgF ₂		
#48-601	MS 0°	40.00	43.30
#45-674	MgF ₂		
#48-602	MS 0°	45.00	48.71
#45-675	MgF ₂		
#48-603	MS 0°	50.00	54.12
#45-676	MgF ₂		
#47-459	MgF ₂		
#48-604	MS 0°		

