

[See all 54 Products in Family](#)**TECHSPEC® 2° Beam Dev. VIS 0° Coated, N-BK7 Wedge Prism**Stock #49-440 **9** In Stock 1  A\$105<sup>.60</sup>**ADD TO CART**

Volume Pricing	
Qty 1-5	A\$105.60 each
Qty 6-25	A\$84.00 each
Qty 26-49	A\$79.20 each
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## Product Downloads

**SPECIFICATIONS****General****Type:**

Wedge Prism

**Note:**

Specify this is S1 &amp; S2 power and irregularity, not the overall power of the wedge

## Physical & Mechanical Properties

Diameter (mm):  
25.00 +0.00/-0.10

Thickness (mm):  
3.00

Bevel:  
Protective as needed

Maximum Edge Thickness (mm):  
4.7

Wedge Angle (arcmin):  
3° 52'

## Optical Properties

Angle Tolerance (arcsec):  
±30

Coating:  
VIS 0° (425-675nm)

Design Wavelength DWL (nm):  
632.8

Substrate:   
N-BK7

Surface Quality:  
20-10

Image Orientation:  
Beam Deviation

Coating Specification:  
 $R_{avg} \leq 0.4\% @ 425 - 675\text{nm}$

Wavelength Range (nm):  
425 - 675

Damage Threshold, Reference:   
5 J/cm² @ 532nm, 10ns

Power (fringes) @ 632.8nm:  
0.50

Irregularity (fringes) @ 632.8nm:  
0.20

Ray Deviation @ 633nm (°):  
2.00

Power (diopters):  
3.49

Wedge Angle (°):  
3.87°

## Material Properties

Coefficient of Thermal Expansion CTE ( $10^{-6}/^\circ\text{C}$ ):  
7.1

## Regulatory Compliance

RoHS 2015:  
Compliant

Certificate of Conformance:  
[View](#)

Reach 235:  
Compliant

## PRODUCT DETAILS

- Ideal for Beam Steering
- 0.5° - 15° Beam Deviation Options
- Available Uncoated or Anti-Reflection Coated
- [Anamorphic Prism Pair Also Available](#)

Wedge prisms can be used individually to deviate a laser beam a set angle, or two wedge prisms can be used together for beam steering applications. A single wedge prism's ability to deviate the angle of an incident beam is measured in Diopters with 1 diopter deviating the beam 1cm at a 1m working distance.

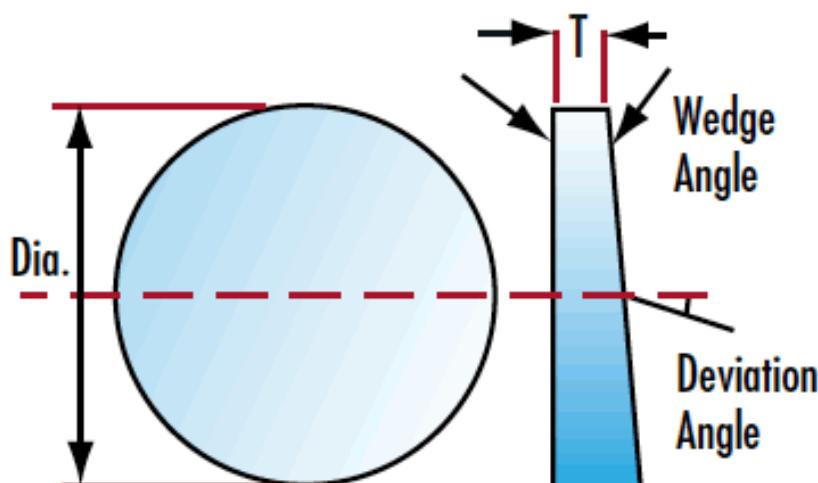
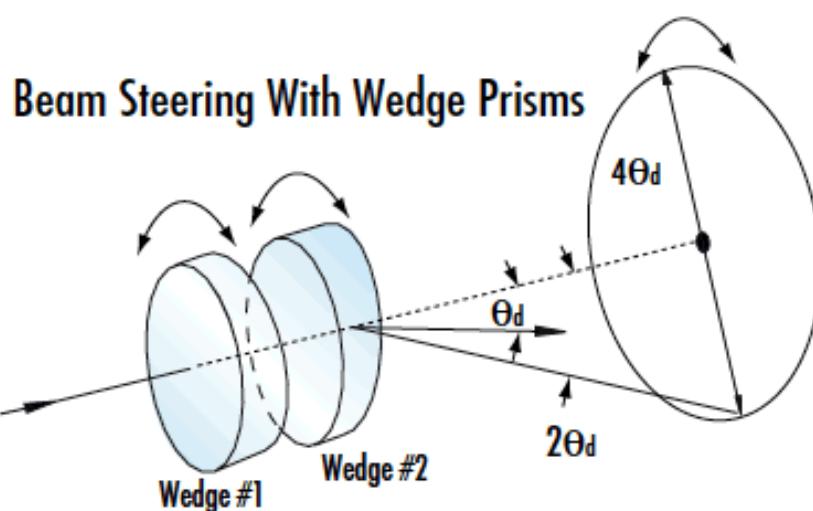
Two wedge prisms can be used as an anamorphic pair for beam shaping (to correct the elliptical shape of diode outputs). Wedge prisms can also be paired to steer a beam anywhere within a circle described by the full angle  $4\theta$ , where  $\theta$  is the deviation from a single prism. This beam steering is accomplished by rotating the two wedge prisms independently of each other and is typically used to scan a beam to different locations in imaging applications.

Note: Beam deviation is shown in degrees and diopters. One diopter is 1cm of deviation at a distance of 1m from the prism.

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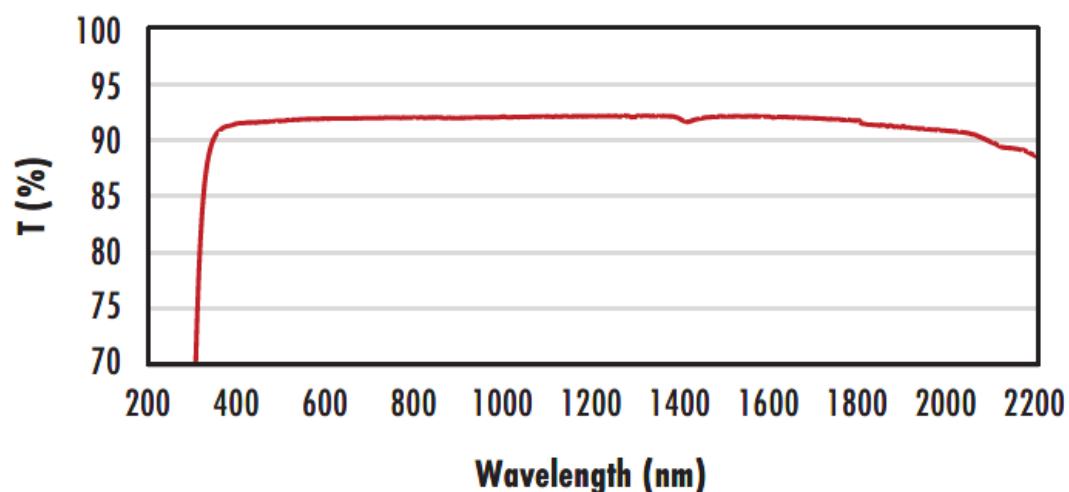
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## TECHNICAL INFORMATION



N-BK7

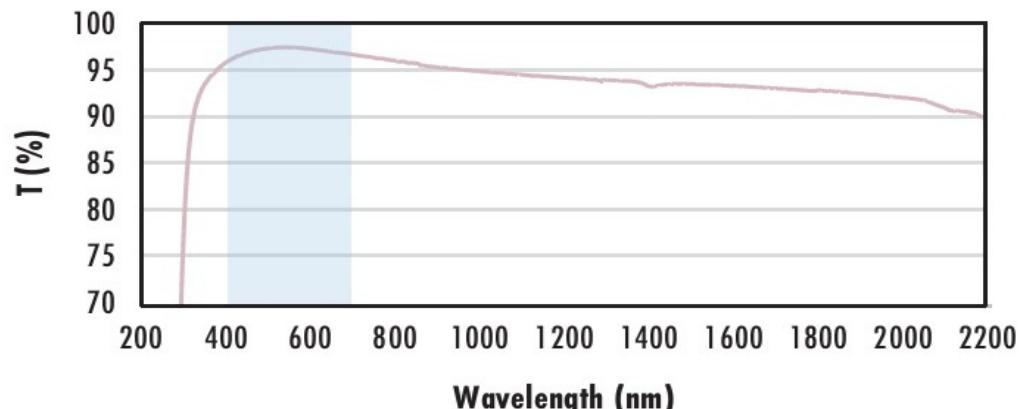
### Uncoated N-BK7 Typical Transmission



Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV- NIR spectra.

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### N-BK7 with $\text{MgF}_2$ Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with  $\text{MgF}_2$  (400-700nm) coating at 0° AOI.

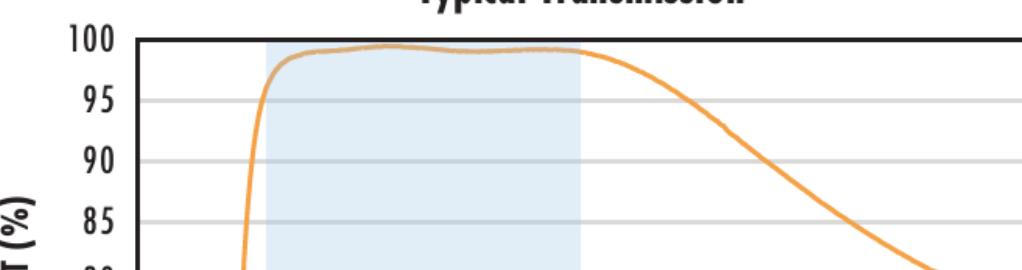
The blue shaded region indicates the coating design wavelength range, with the following specification:

$R_{\text{avg}} \leq 1.75\% @ 400 - 700\text{nm}$  (N-BK7)

Data outside this range is not guaranteed and is for reference only.

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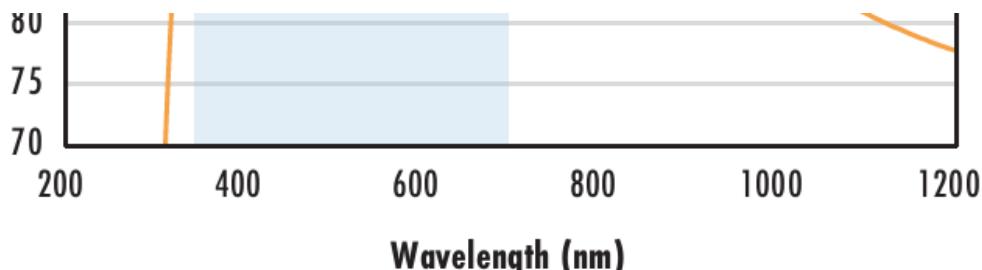
### N-BK7 with VIS-EXT Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

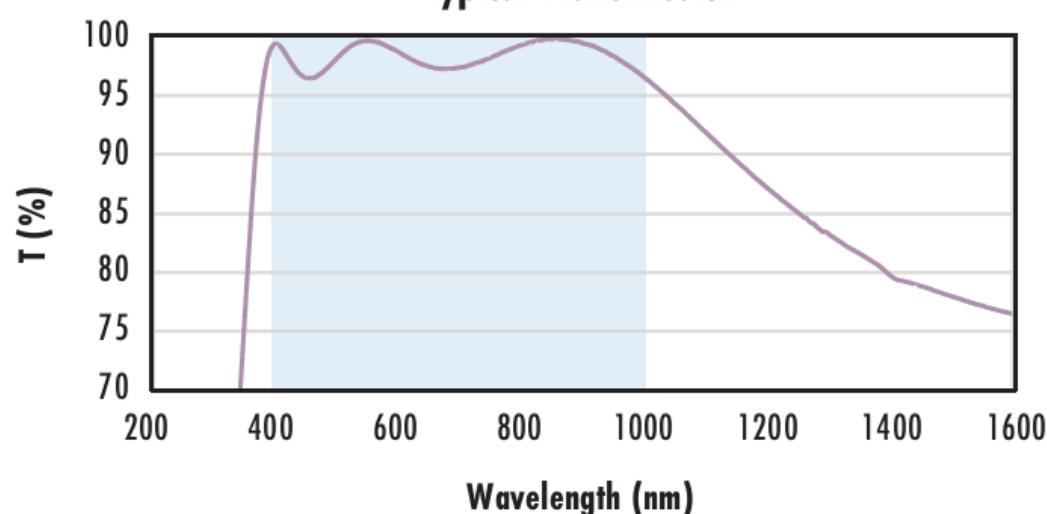
$R_{\text{avg}} \leq 0.5\% @ 350 - 700\text{nm}$



Data outside this range is not guaranteed and is for reference only.

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### N-BK7 with VIS-NIR Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.

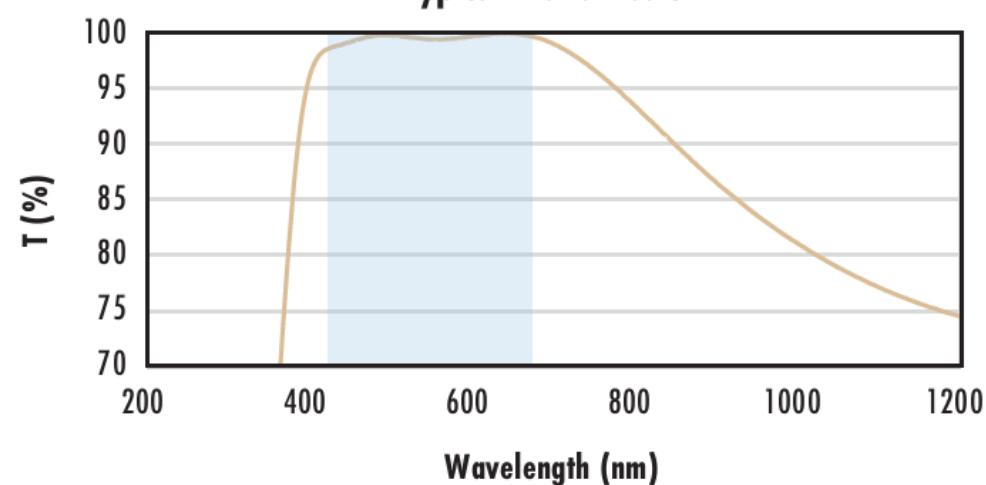
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$\begin{aligned} R_{abs} &\leq 0.25\% @ 880\text{nm} \\ R_{avg} &\leq 1.25\% @ 400 - 870\text{nm} \\ R_{avg} &\leq 1.25\% @ 890 - 1000\text{nm} \end{aligned}$$

Data outside this range is not guaranteed and is for reference only.

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### N-BK7 with VIS 0° Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

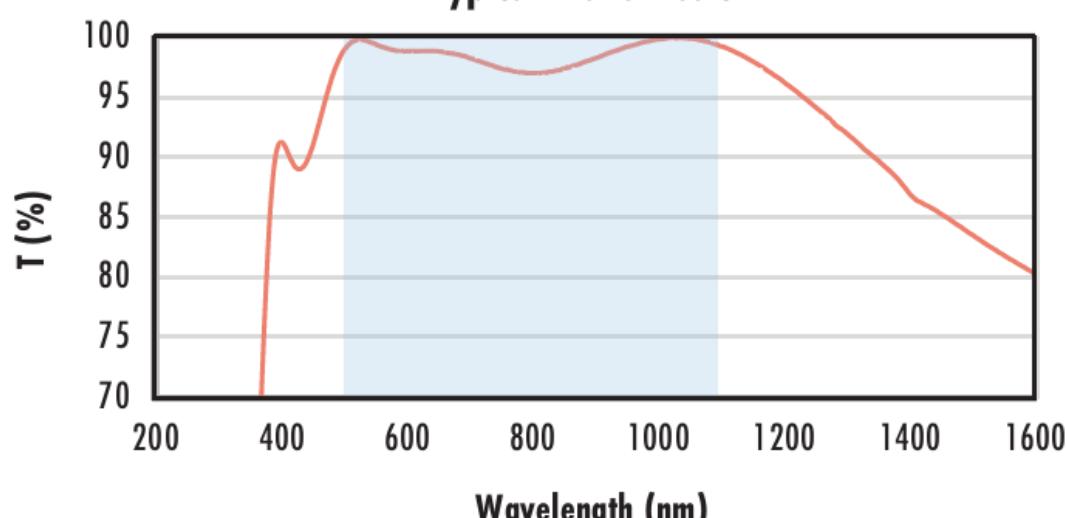
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{avg} \leq 0.4\% @ 425 - 675\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

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### N-BK7 with YAG-BBAR Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

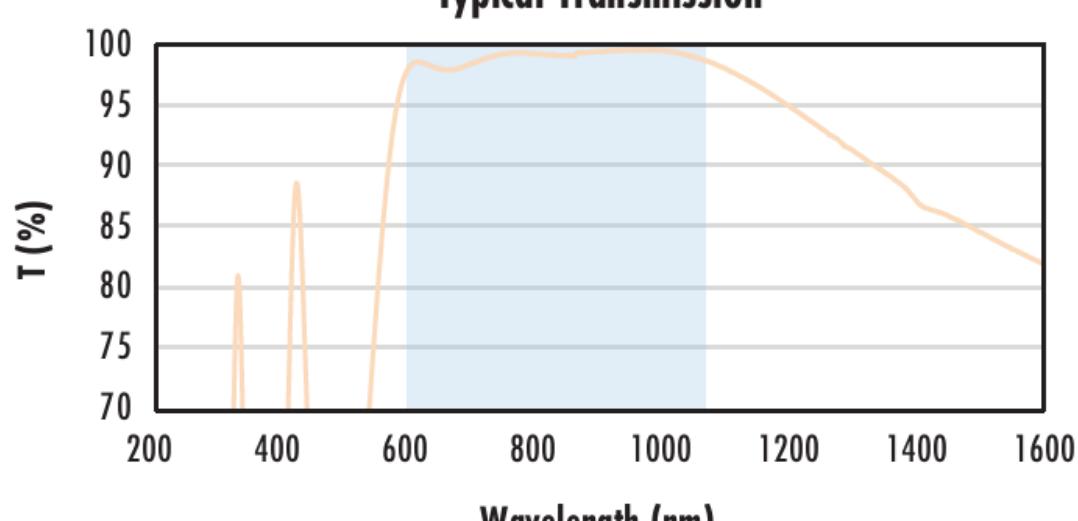
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$\begin{aligned} R_{abs} &\leq 0.25\% @ 532\text{nm} \\ R_{abs} &\leq 0.25\% @ 1064\text{nm} \\ R_{avg} &\leq 1.0\% @ 500 - 1100\text{nm} \end{aligned}$$

Data outside this range is not guaranteed and is for reference only.

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### N-BK7 with NIR I Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

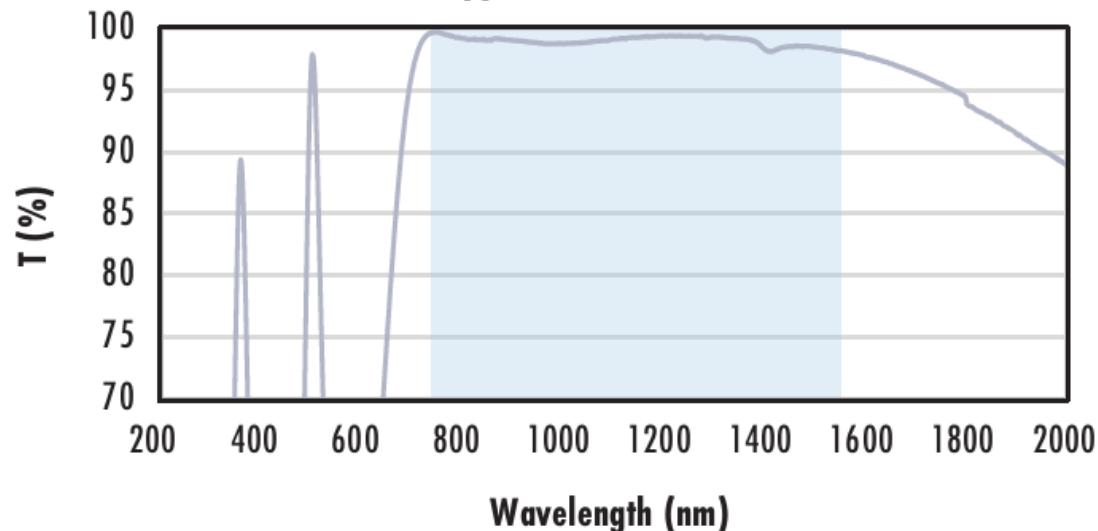
$$R_{avg} \leq 0.5\% @ 600 - 1050\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

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### N-BK7 with NIR II Coating

## Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

$R_{abs} \leq 1.5\% @ 750 - 800\text{nm}$   
 $R_{abs} \leq 1.0\% @ 800 - 1550\text{nm}$   
 $R_{avg} \leq 0.7\% @ 750 - 1550\text{nm}$

Data outside this range is not guaranteed and is for reference only.

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- High-precision surface quality and flatness
- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

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