

TECHSPEC<sup>®</sup> 10° Beam Dev. 12.5mm Dia. VIS-NIR, N-BK7 Wedge Prism



Stock **#35-800** [CONTACT US](#)

-

1

+

€57<sup>.50</sup>

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General

Type:

Wedge Prism

Note:

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

Physical & Mechanical Properties

Diameter (mm):

|                      |                       |
|----------------------|-----------------------|
| 12.50 +0.00/-0.10    |                       |
| 1.50                 | Thickness (mm):       |
|                      | Bevel:                |
| Protective as needed |                       |
| 18° 8'               | Wedge Angle (arcmin): |

|                                                                                                                    |                                   |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| Optical Properties                                                                                                 |                                   |
| ±30                                                                                                                | Angle Tolerance (arcsec):         |
| VIS-NIR (400-1000nm)                                                                                               | Coating:                          |
| 632.8                                                                                                              | Design Wavelength DWL (nm):       |
| N-BK7                                                                                                              | Substrate: □                      |
| 20-10                                                                                                              | Surface Quality:                  |
| Beam Deviation                                                                                                     | Image Orientation:                |
| R <sub>abs</sub> ≤0.25% @ 880nm<br>R <sub>avg</sub> ≤1.25% @ 400 - 870nm<br>R <sub>avg</sub> ≤1.25% @ 890 - 1000nm | Coating Specification:            |
| 400 - 1000                                                                                                         | Wavelength Range (nm):            |
| 0.50                                                                                                               | Power (fringes) @ 632.8nm:        |
| 0.20                                                                                                               | Irregularity (fringes) @ 632.8nm: |
| 10.00                                                                                                              | Ray Deviation @ 633nm (°):        |
| 17.63                                                                                                              | Power (diopters):                 |
| 18.13°                                                                                                             | Wedge Angle (°):                  |

|                     |                                                              |
|---------------------|--------------------------------------------------------------|
| Material Properties |                                                              |
| 7.1                 | Coefficient of Thermal Expansion CTE (10 <sup>-6</sup> /°C): |

|                       |                             |
|-----------------------|-----------------------------|
| Regulatory Compliance |                             |
| Compliant             | RoHS 2015:                  |
| View                  | Certificate of Conformance: |
| Compliant             | Reach 235:                  |

## 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

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## Product Details

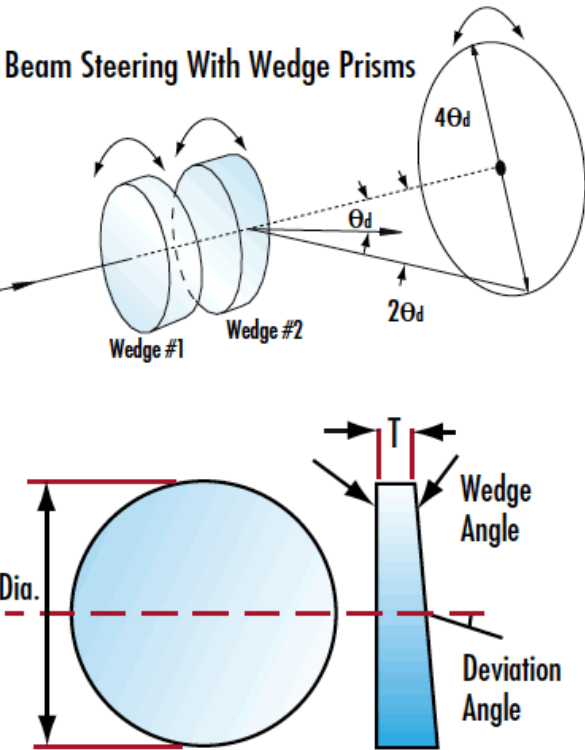
- Ideal for Beam Steering
- 0.5° - 15° Beam Deviation Options
- Available Uncoated or Anti-Reflection Coated
- [Anamorphic Prism Pair](#) Also Available

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 4θ, where θ 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.

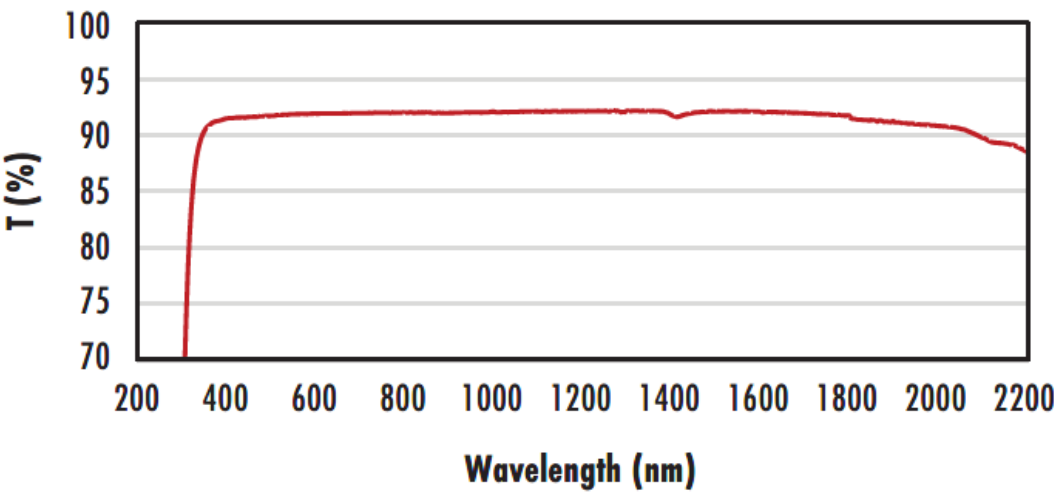
Note: Beam deviation is shown in degrees and diopters. One diopter is 1cm of deviation at a distance of 1m from the prism.

Technical Information



N-BK7

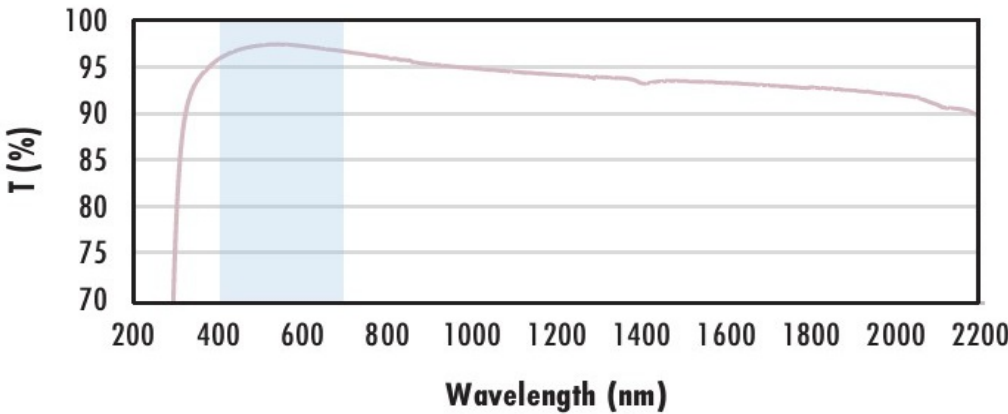
Uncoated N-BK7 Typical Transmission



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

[Click Here to Download Data](#)

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  $0^\circ$  AOI.

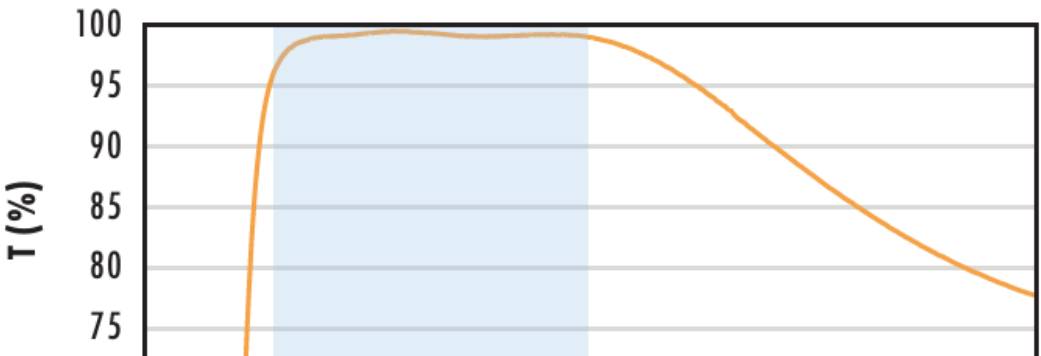
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

N-BK7 with VIS-EXT Coating Typical Transmission



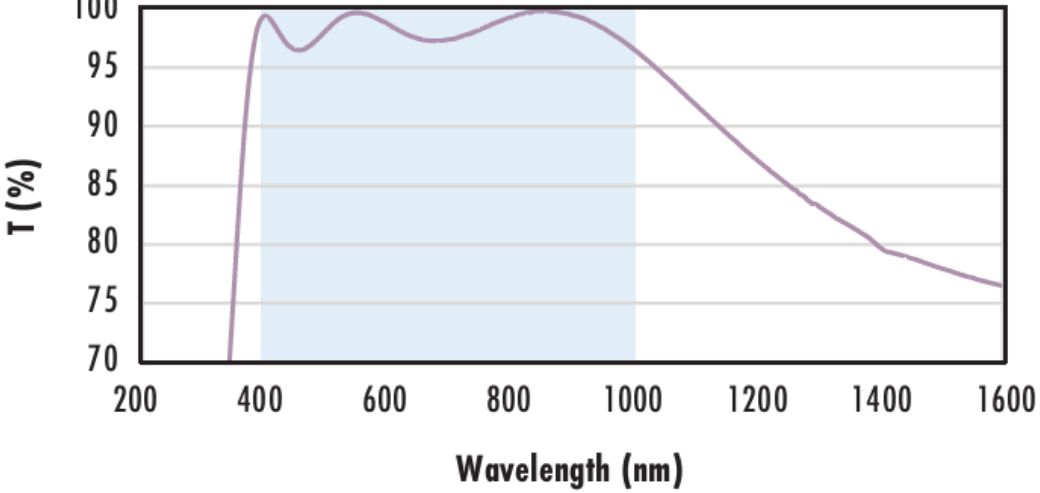
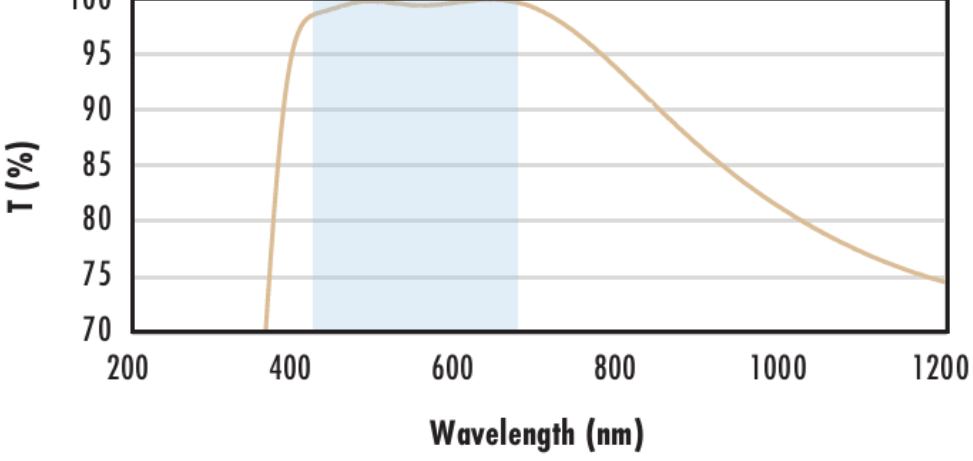
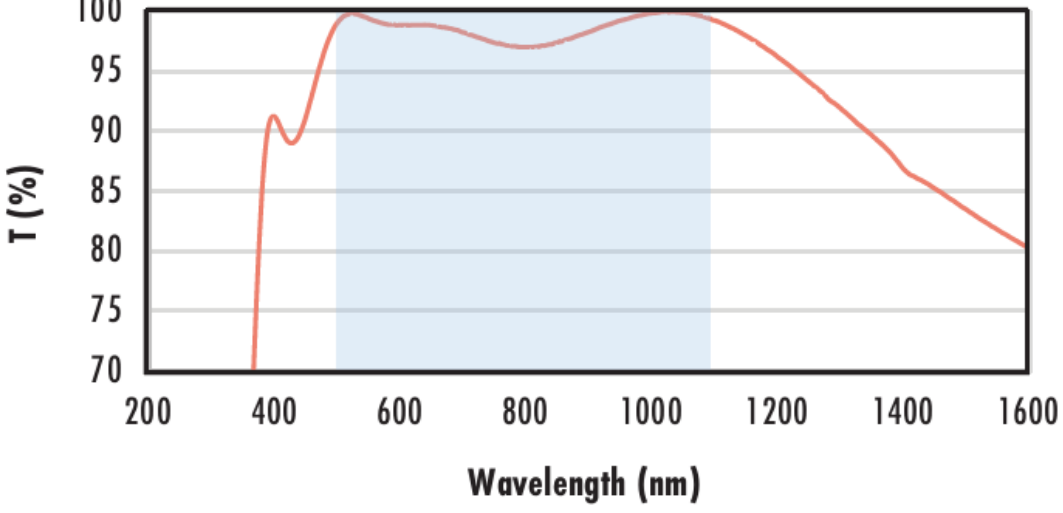
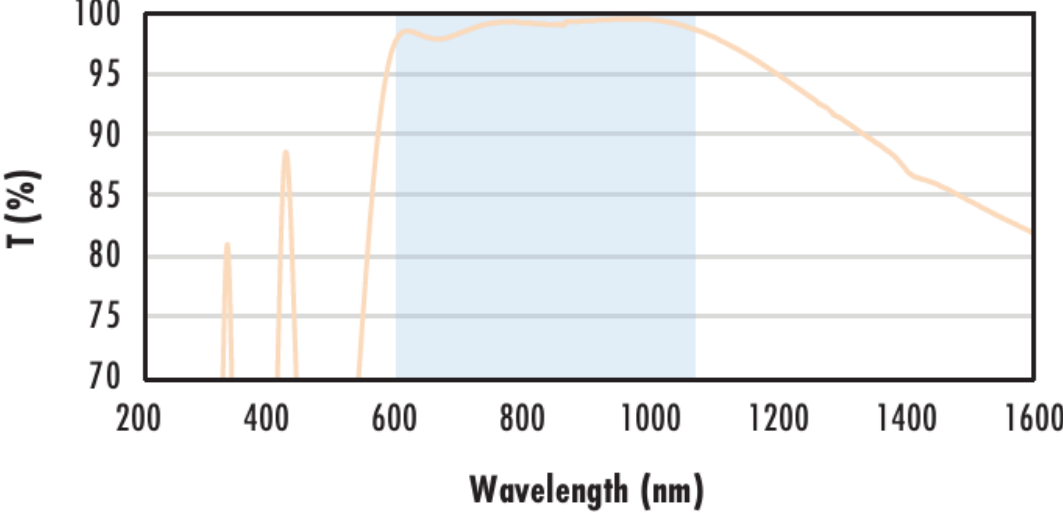
Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at  $0^\circ$  AOI.

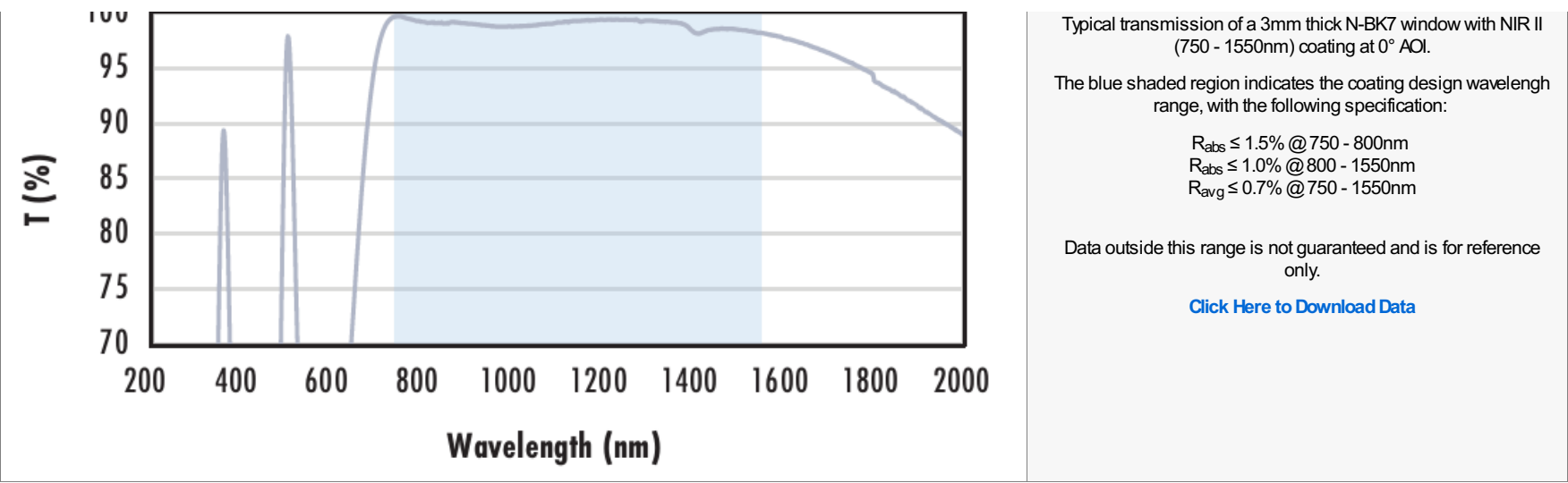
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

|                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p data-bbox="583 281 1008 379"><b>N-BK7 with VIS-NIR Coating</b><br/><b>Typical Transmission</b></p>       | <p data-bbox="1331 400 1852 451">Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.</p> <p data-bbox="1331 463 1852 513">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1467 525 1715 602"><math>R_{abs} \leq 0.25\% \text{ @ } 880\text{nm}</math><math>R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}</math><math>R_{avg} \leq 1.25\% \text{ @ } 890 - 1000\text{nm}</math></div> <p data-bbox="1341 635 1841 685">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 697 1711 721"><a href="#">Click Here to Download Data</a></p>      |
| <p data-bbox="594 905 976 1003"><b>N-BK7 with VIS 0° Coating</b><br/><b>Typical Transmission</b></p>      | <p data-bbox="1337 1038 1845 1089">Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.</p> <p data-bbox="1331 1101 1852 1151">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1476 1163 1707 1187"><math>R_{avg} \leq 0.4\% \text{ @ } 425 - 675\text{nm}</math></div> <p data-bbox="1341 1199 1841 1249">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 1261 1711 1285"><a href="#">Click Here to Download Data</a></p>                                                                                                                      |
| <p data-bbox="567 1498 1039 1596"><b>N-BK7 with YAG-BBAR Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1341 1629 1845 1679">Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.</p> <p data-bbox="1331 1691 1852 1742">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1470 1754 1713 1831"><math>R_{abs} \leq 0.25\% \text{ @ } 532\text{nm}</math><math>R_{abs} \leq 0.25\% \text{ @ } 1064\text{nm}</math><math>R_{avg} \leq 1.0\% \text{ @ } 500 - 1100\text{nm}</math></div> <p data-bbox="1341 1840 1841 1890">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 1902 1711 1926"><a href="#">Click Here to Download Data</a></p> |
| <p data-bbox="615 2122 1008 2220"><b>N-BK7 with NIR I Coating</b><br/><b>Typical Transmission</b></p>     | <p data-bbox="1341 2291 1845 2341">Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.</p> <p data-bbox="1331 2353 1852 2404">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1470 2415 1713 2439"><math>R_{avg} \leq 0.5\% \text{ @ } 600 - 1050\text{nm}</math></div> <p data-bbox="1341 2451 1841 2502">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 2513 1711 2537"><a href="#">Click Here to Download Data</a></p>                                                                                                                   |
| <p data-bbox="604 2775 1018 2873"><b>N-BK7 with NIR II Coating</b><br/><b>Typical Transmission</b></p>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |



Coating Curves