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TECHSPEC® 50mm, VIS-NIR Coated, N-BK7 Wedged Window

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Stock #25-726 **7 In Stock**

⊖ 1 ⊕ £202⁴⁰

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Volume Pricing	
Qty 1-5	£202.40 each
Qty 6-25	£162.40 each
Qty 26-49	£152.00 each
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Product Downloads

General

Wedged Window **Type:**

Physical & Mechanical Properties

45.00 **Clear Aperture CA (mm):**

Diameter (mm):

50.00 +0.0/-0.10

3.00 ±0.20 Thickness (mm):

Fine Ground Edges:

82 Young's Modulus (GPa):

30' ±10' Wedge Angle (arcmin):

Optical Properties

VIS-NIR (400-1000nm) Coating:

N-BK7 Substrate:

1.516 Index of Refraction (n_d):

20-10 Surface Quality:

Coating Specification:
Rabs ≤0.25% @ 880nm
Ravg ≤1.25% @ 400 - 870nm
Ravg ≤1.25% @ 890 - 1000nm

400 - 1000 Wavelength Range (nm):

M10 over 25mm Aperture Surface Flatness (P-V):

Material Properties

Coefficient of Thermal Expansion CTE ($10^{-6}/^{\circ}\text{C}$):
7.1 (-30 to +70°C) 8.3 (+20 to +300°C)

Regulatory Compliance

Compliant RoHS 2015:

View Certificate of Conformance:

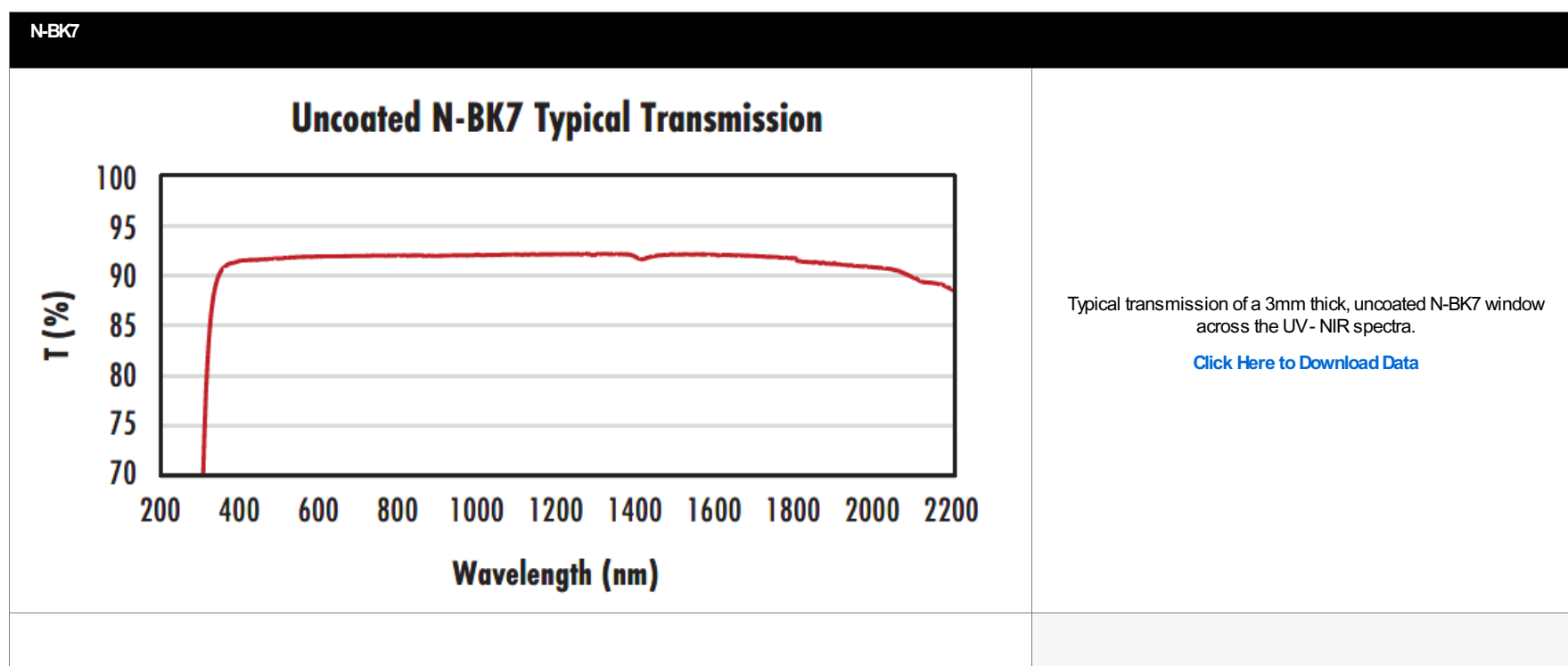
Compliant Reach 235:

Product Details

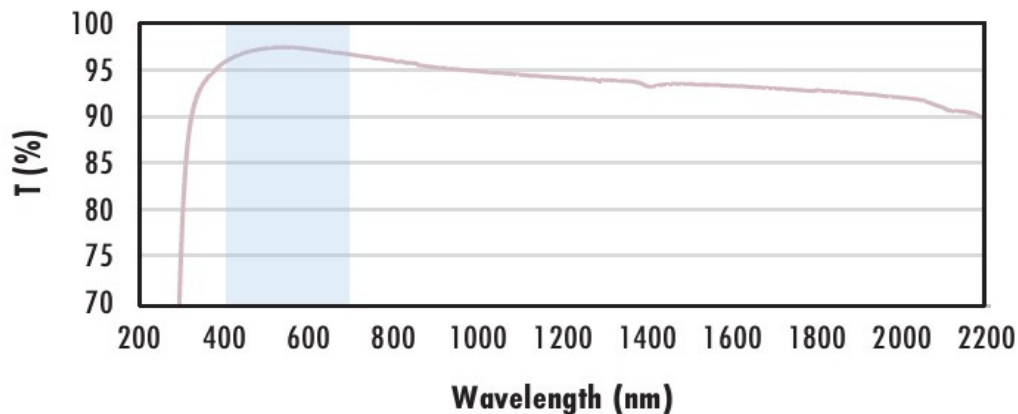
- N-BK7 Substrates with a 30 Arcminute Wedge
- M10 Surface Flatness and 20-10 Surface Quality
- Ideal for Eliminating Etalon Effects
- [Fused Silica Wedged Windows](#) and [N-BK7 Flat Windows](#) Also Available

TECHSPEC® N-BK7 Wedged Windows are available in standard metric sizes with a 30 arcminute wedge. The wedge of these windows eliminate Etalon effects by preventing back surface reflections from traveling along the same optical path as the transmitted beam. In laser cavities, wedged windows help prevent laser instability, mode-hopping, and power spikes caused by these unwanted reflections. TECHSPEC N-BK7 Wedged Windows are often used as a cost-effective alternative to [Fused Silica Wedged Windows](#) in applications that do not require UV transmission or where high thermal stability is not required such as with low power visible or NIR lasers. Wedged windows can also be used as beam samplers or beam pick-off optics to monitor laser beam properties such as beam power over time.

Technical Information



N-BK7 with MgF₂ Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with MgF₂ (400-700nm) coating at 0° AOI.

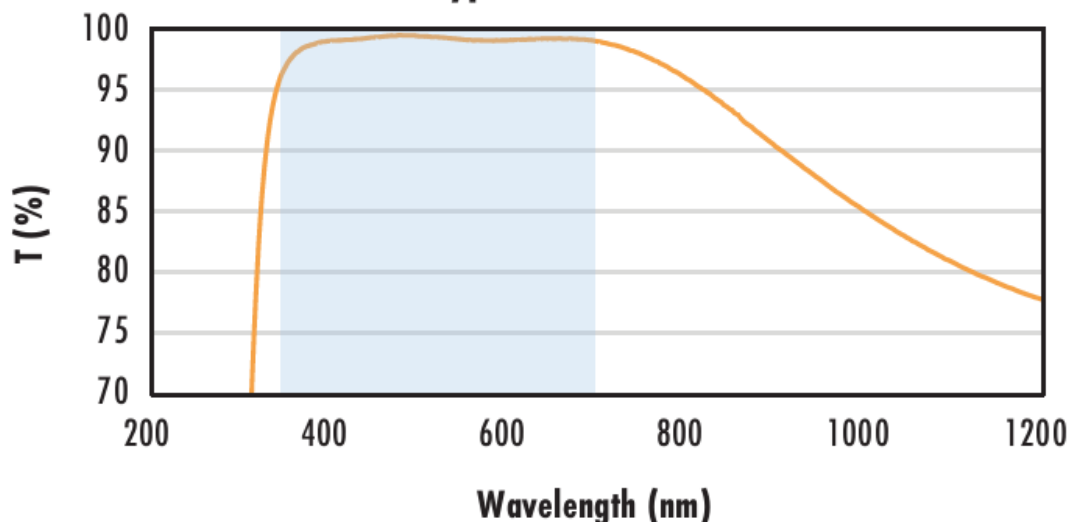
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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° AOI.

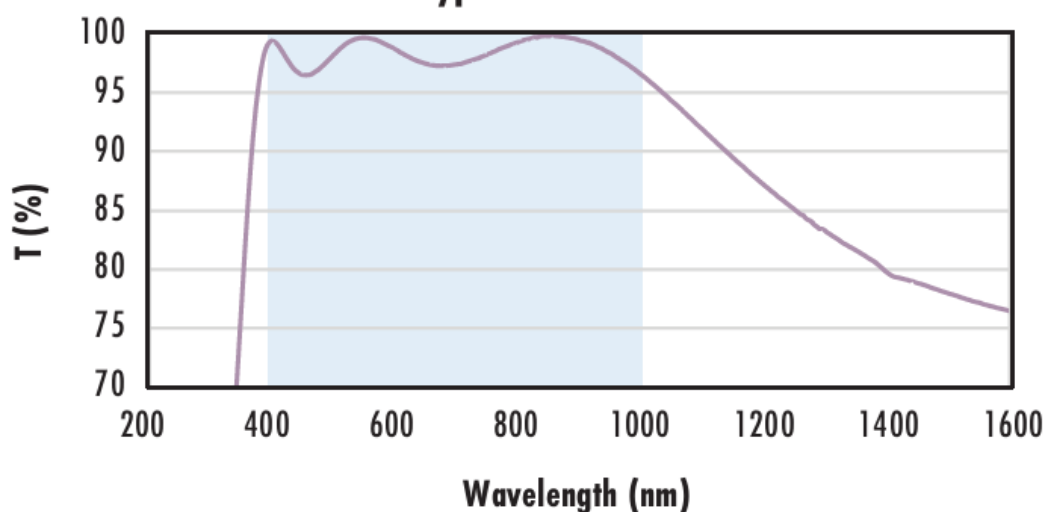
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

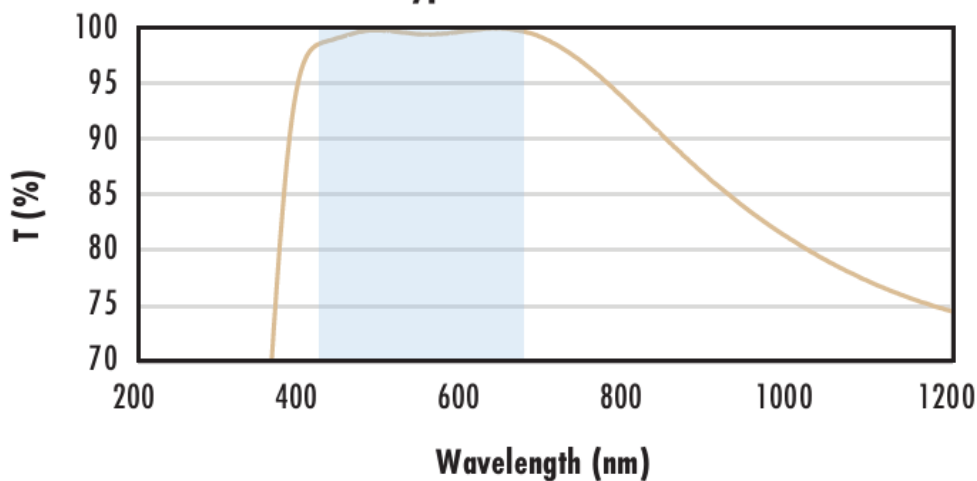
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

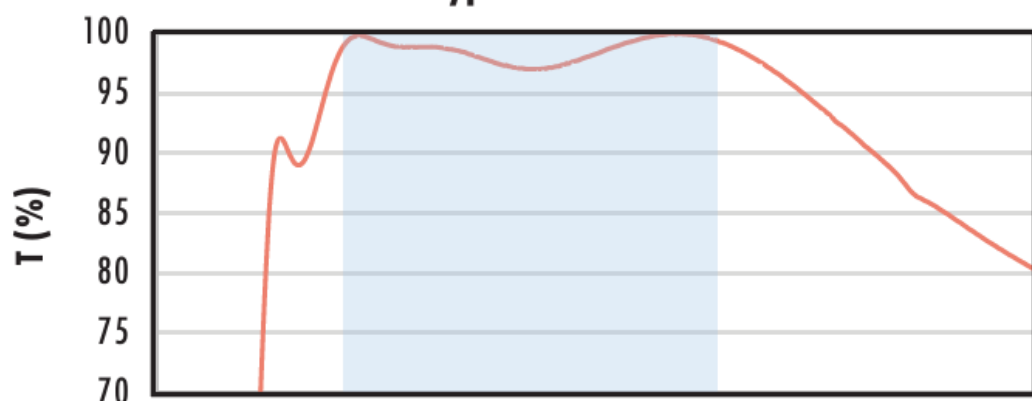
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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N-BK7 with YAG-BBAR Coating Typical Transmission



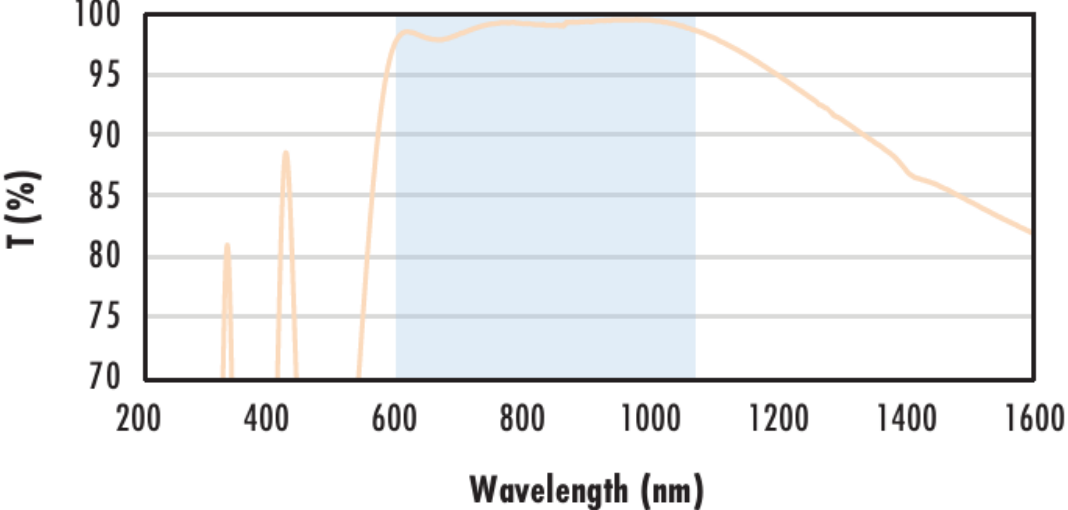
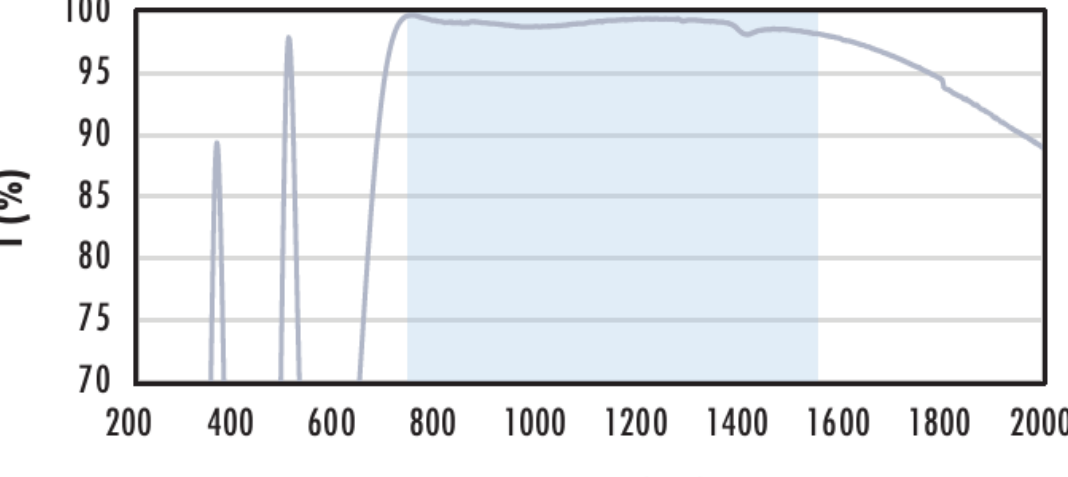
Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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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<p>200 400 600 800 1000 1200 1400 1600</p> <p>Wavelength (nm)</p>	
<p>N-BK7 with NIR I Coating Typical Transmission</p>  <p>100 95 90 85 80 75 70</p> <p>200 400 600 800 1000 1200 1400 1600</p> <p>Wavelength (nm)</p>	<p>Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p>$R_{avg} \leq 0.5\% @ 600 - 1050nm$</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p>Click Here to Download Data</p>
<p>N-BK7 with NIR II Coating Typical Transmission</p>  <p>100 95 90 85 80 75 70</p> <p>200 400 600 800 1000 1200 1400 1600 1800 2000</p> <p>Wavelength (nm)</p>	<p>Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p>$R_{abs} \leq 1.5\% @ 750 - 800nm$ $R_{abs} \leq 1.0\% @ 800 - 1550nm$ $R_{avg} \leq 0.7\% @ 750 - 1550nm$</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p>Click Here to Download Data</p>

Coating Curves