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TECHSPEC® 50mm N-BK7 Wedged Window

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Stock #34-246 **14 In Stock**

- 1 + MRP ₹21,490

Price inclusive of all taxes

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Volume Pricing	
Qty 1-5	₹21,490 each
Qty 6-25	₹17,151 each
Qty 26-49	₹16,142 each
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General

Wedged Window **Type:**

Glass **Type of Window:**

Physical & Mechanical Properties

Clear Aperture CA (mm):

45.00	Diameter (mm):
50.00 +0.0/-0.10	
	Thickness (mm):
3.00 ±0.20	
	Dimensional Tolerance (mm):
+0.0/-0.10	
	Bevel:
Protective as needed	
	Clear Aperture (%):
90.00	
	Edges:
Fine Ground	
	Poisson's Ratio:
0.21	
	Young's Modulus (GPa):
82	
	Knoop Hardness (kg/mm²):
610.00	
	Wedge Angle (arcmin):
30' ±10'	

Optical Properties

	Coating:
Uncoated	
	Substrate: <input type="checkbox"/>
N-BK7	
	Index of Refraction (n_d):
1.516	
	Surface Quality:
20-10	
	Surface Accuracy:
M10 (over 25mm aperture)	
	Abbe Number (v_d):
64.17	
	Wavelength Range (nm):
350 - 2200	
	Surface Flatness (P-V):
M10 over 25mm Aperture	

Material Properties

	Density (g/cm³):
2.51	
	Coefficient of Thermal Expansion CTE (10⁻⁶/°C):
7.1 (-30 to +70°C)	
8.3 (+20 to +300°C)	

Regulatory Compliance

	RoHS 2015:
Compliant	
	Certificate of Conformance:
View	
	Reach 247:
Compliant	
	Country of Origin:
United States	
	Imported By:
Edmund Optics India Private Limited 267, Greystone Building, Second Floor, 6th Cross Rd, Binnamangala, Stage 1, Indiranagar, Bengaluru, Karnataka, India 560038 Phone: +91- 80-6845 0000	

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

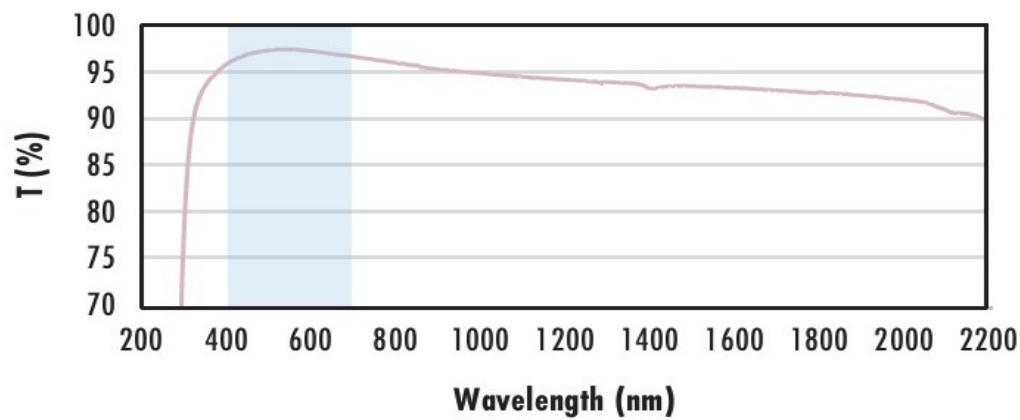
Uncoated N-BK7 Typical Transmission



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

[Click Here to Download Data](#)

N-BK7 with MgF₂ Coating Typical Transmission



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

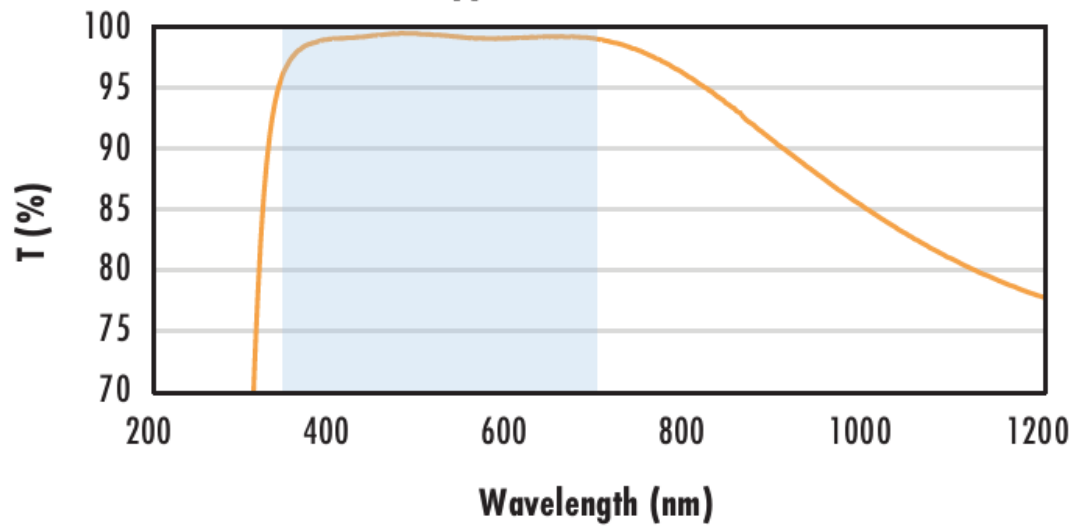
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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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.

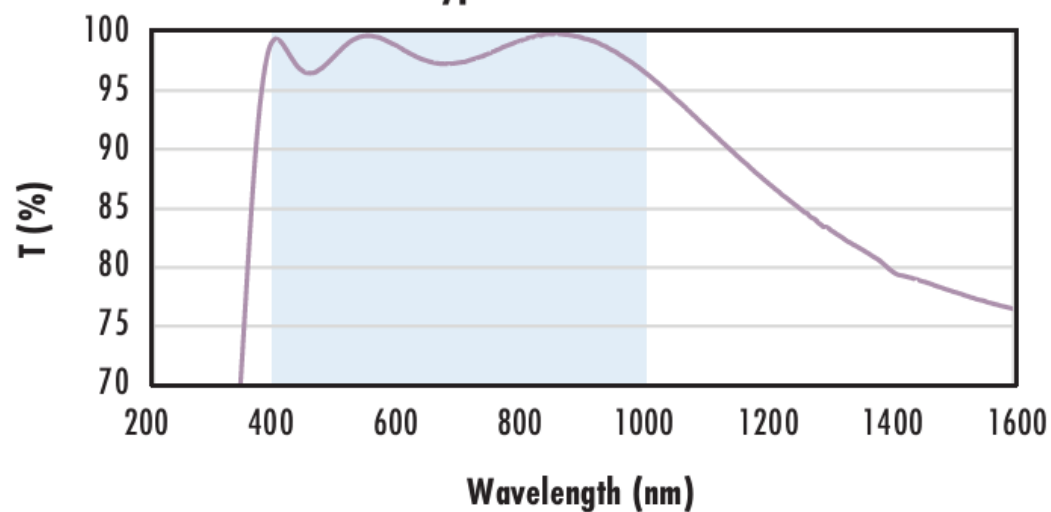
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

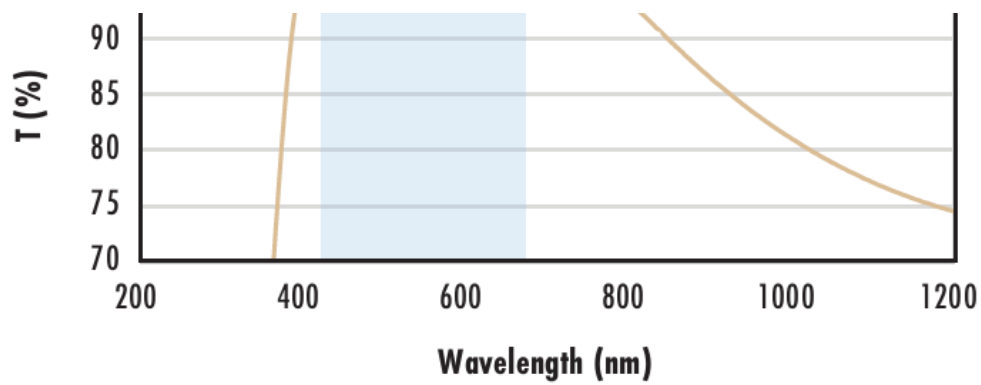
Data outside this range is not guaranteed and is for reference only.

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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.



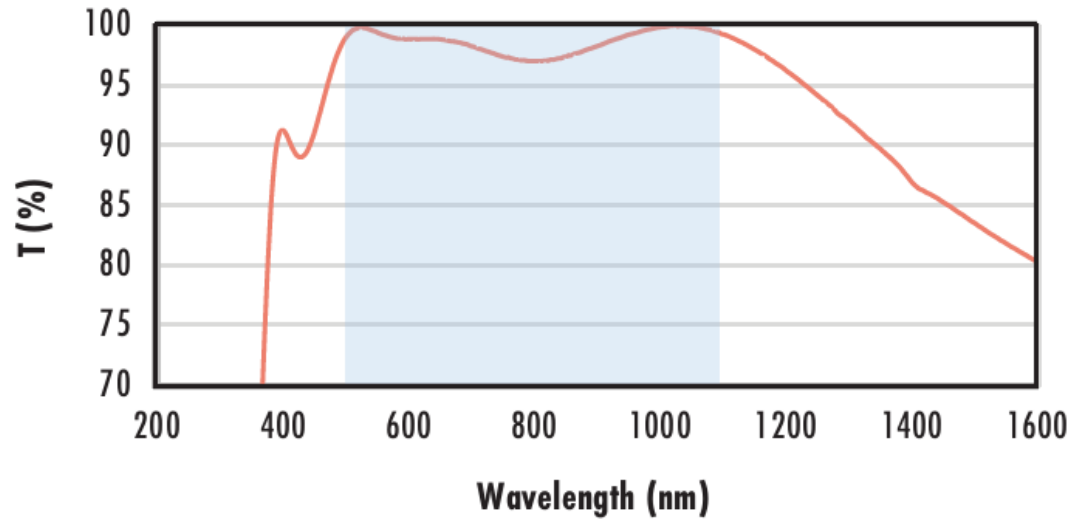
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

$$R_{abs} \leq 0.25\% @ 532\text{nm}$$

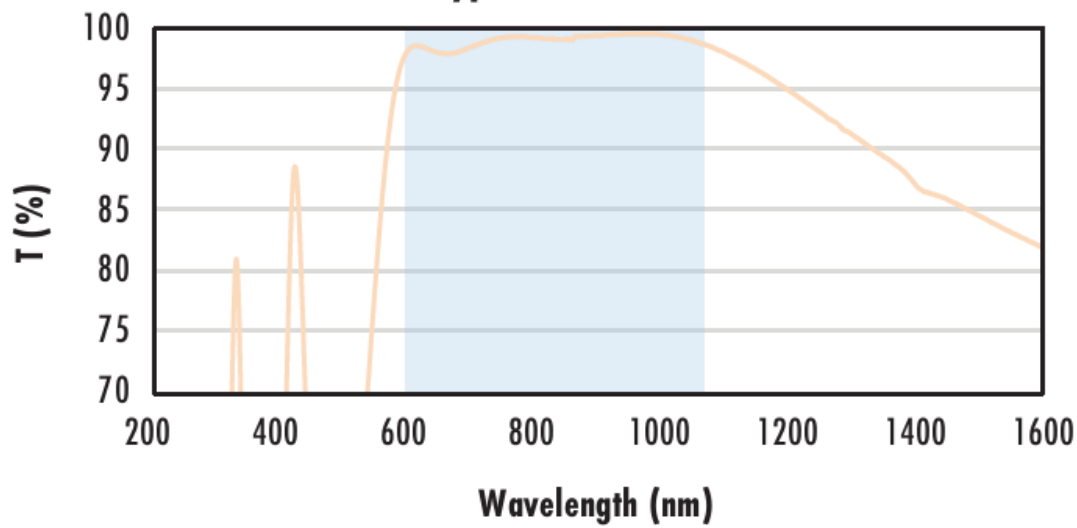
$$R_{abs} \leq 0.25\% @ 1064\text{nm}$$

$$R_{avg} \leq 1.0\% @ 500 - 1100\text{nm}$$

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.

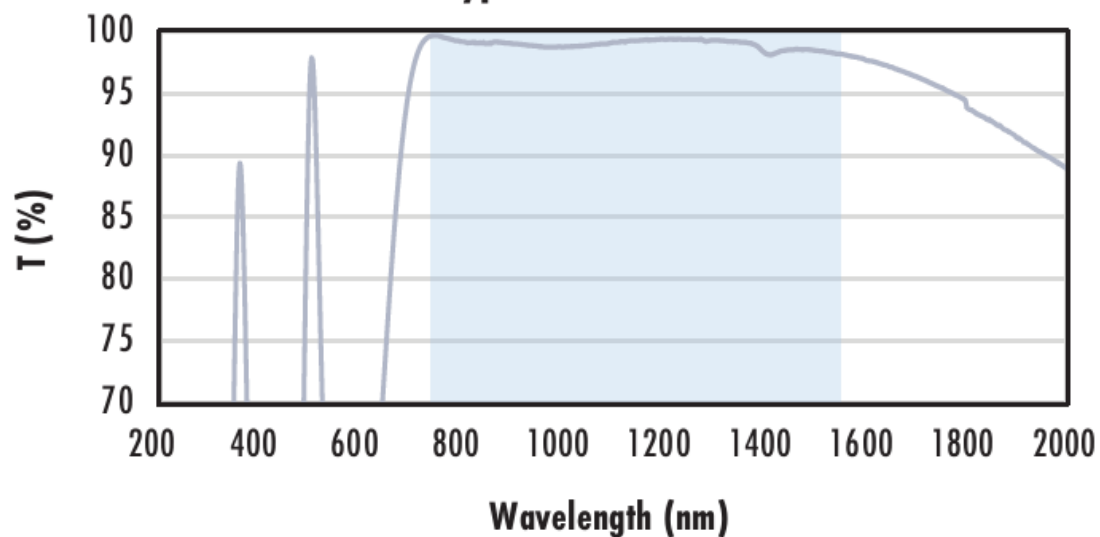
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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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