

[See all 9 Products in Family](#)

TECHSPEC® 50mm N-BK7 Wedged Window

See More by [SCHOTT Optical Components](#)



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

⊖ 1 ⊕ €213⁰⁰

ADD TO CART

Volume Pricing

| | |
|------------|-------------------------------|
| Qty 1-5 | €213,00 each |
| Qty 6-25 | €170,00 each |
| Qty 26-49 | €160,00 each |
| Need More? | Request Quote |

ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

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 | |

Product Details

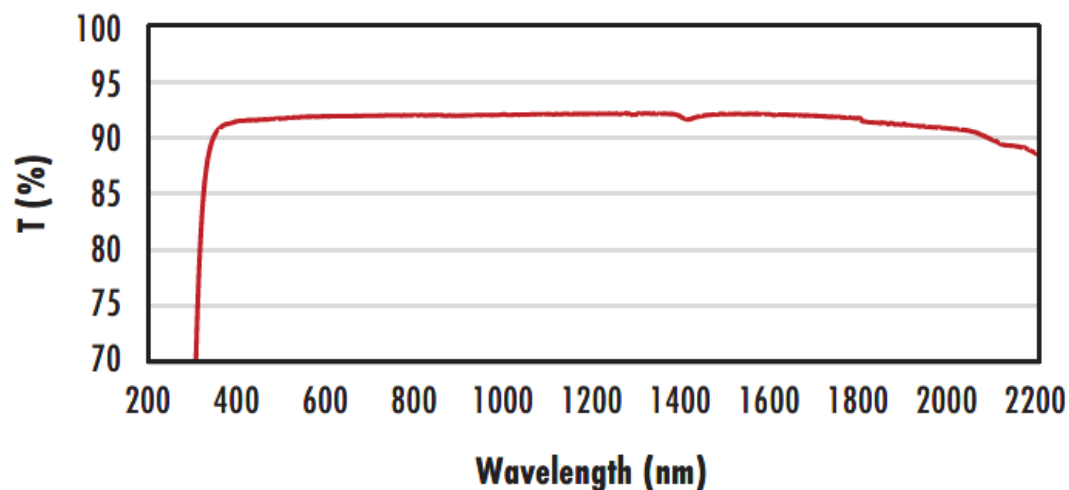
- N-BK7 Substrates with a 30 Arcminute Wedge
- M10 Surface Flatness and 20-10 Surface Quality
- Ideal for Eliminating Etalon Effects
- [Fused Silica Wedged Windows](#) and [N-BK7 Flat Windows](#) Also Available

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

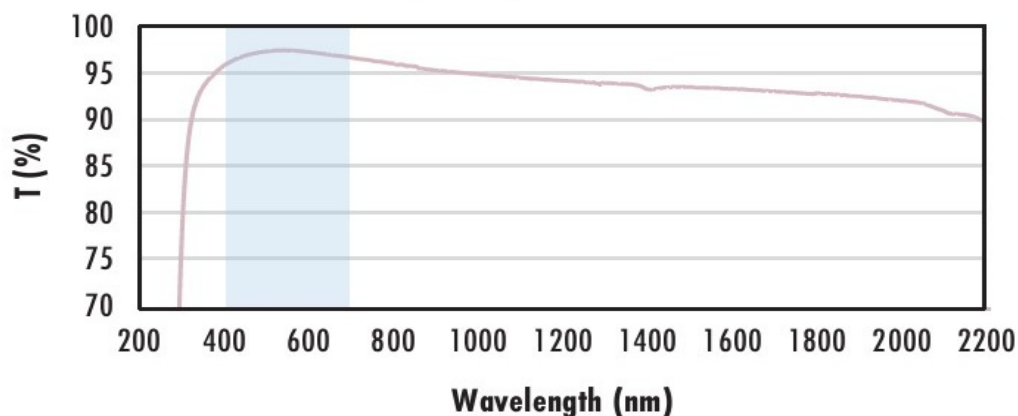
Uncoated N-BK7 Typical Transmission



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.

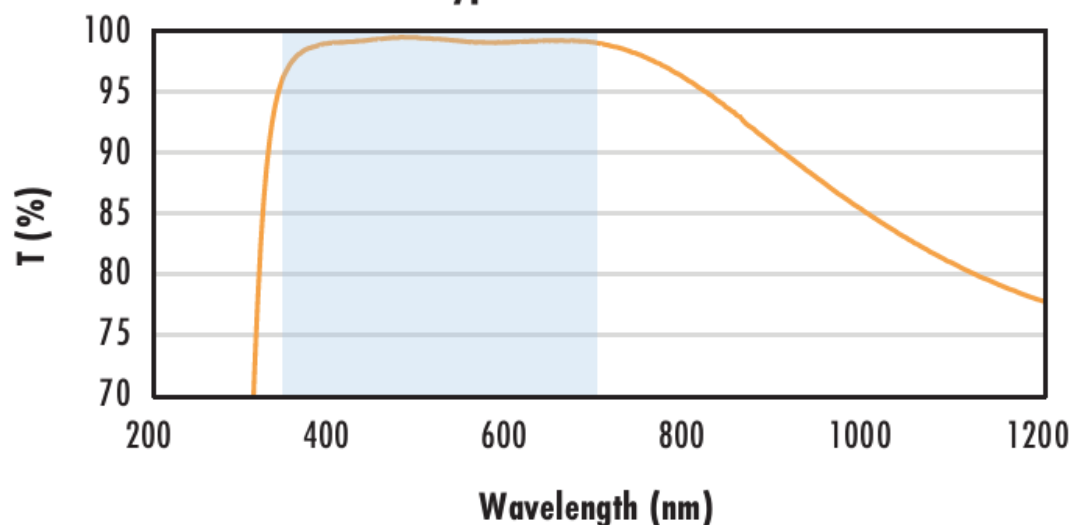
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[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.

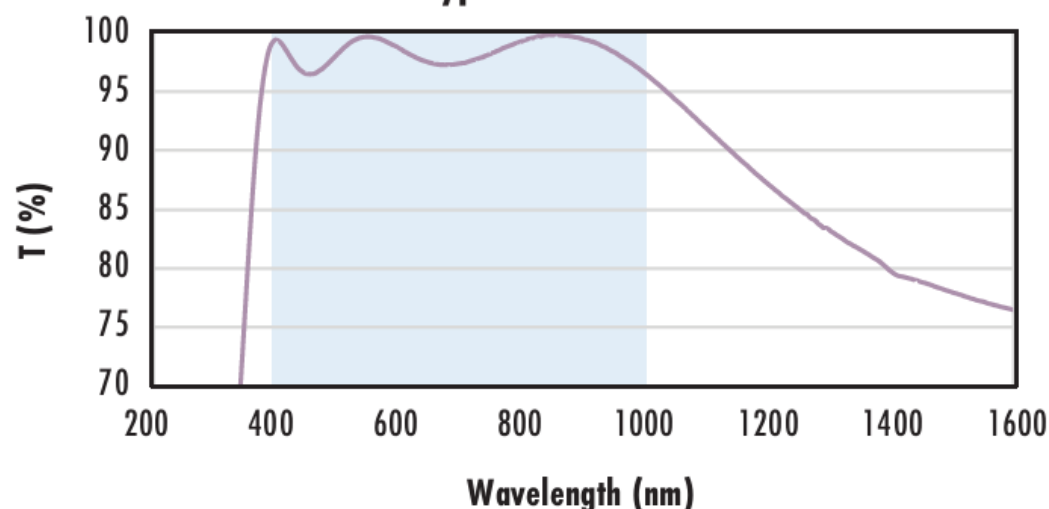
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

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:

$$R_{abs} \leq 0.25\% @ 880\text{nm}$$

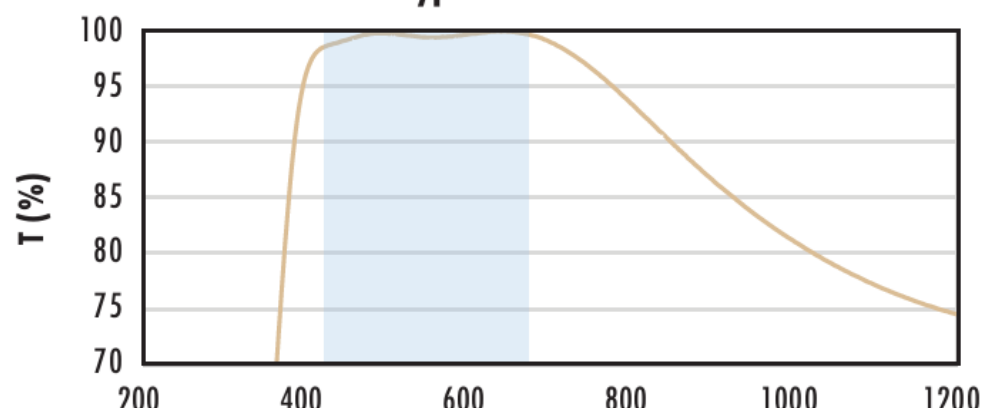
$$R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$$

$$R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$$

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

[Click Here to Download Data](#)

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.

[Click Here to Download Data](#)

| Wavelength (nm) | |
|---|--|
| <p style="text-align: center;">N-BK7 with YAG-BBAR Coating Typical Transmission</p> <p style="text-align: center;">Wavelength (nm)</p> | <p>Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p style="text-align: center;">$R_{abs} \leq 0.25\%$ @ 532nm $R_{abs} \leq 0.25\%$ @ 1064nm $R_{avg} \leq 1.0\%$ @ 500 - 1100nm</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p style="text-align: center;">Click Here to Download Data</p> |
| <p style="text-align: center;">N-BK7 with NIR I Coating Typical Transmission</p> <p style="text-align: center;">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 style="text-align: center;">$R_{avg} \leq 0.5\%$ @ 600 - 1050nm</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p style="text-align: center;">Click Here to Download Data</p> |
| <p style="text-align: center;">N-BK7 with NIR II Coating Typical Transmission</p> <p style="text-align: center;">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 style="text-align: center;">$R_{abs} \leq 1.5\%$ @ 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 style="text-align: center;">Click Here to Download Data</p> |