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**TECHSPEC® 20mm Dia., 3mm Thick, Uncoated  $\lambda/4$  N-BK7 Window**



Stock **#45-577** **20+ In Stock**

⊖ 1 ⊕ **A\$123<sup>.20</sup>**

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Volume Pricing	
Qty 1-5	<b>A\$123.20</b> each
Qty 6-25	<b>A\$99.20</b> each
Qty 26-49	<b>A\$93.60</b> each
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137.00

#Sorting:

**General**

Protective Window

Type:

**Physical & Mechanical Properties**

18.00

Clear Aperture CA (mm):

20.00 +0.0/-0.25	<b>Diameter (mm):</b>
3.00 ±0.20	<b>Thickness (mm):</b>
<1	<b>Parallelism (arcmin):</b>
Protective as needed	<b>Bevel:</b>
90	<b>Clear Aperture (%):</b>
Fine Ground	<b>Edges:</b>
0.21	<b>Poisson's Ratio:</b>
82	<b>Young's Modulus (GPa):</b>
610.00	<b>Knoop Hardness (kg/mm<sup>2</sup>):</b>

## Optical Properties

Uncoated	<b>Coating:</b>
<b>N-BK7</b>	<b>Substrate:</b> □
1.516	<b>Index of Refraction (n<sub>d</sub>):</b>
60-40	<b>Surface Quality:</b>
64.17	<b>Abbe Number (v<sub>d</sub>):</b>
350 - 2200	<b>Wavelength Range (nm):</b>
λ/4	<b>Surface Flatness (P-V):</b>

## Material Properties

2.51	<b>Density (g/cm<sup>3</sup>):</b>
7.1 (-30 to +70°C) 8.3 (+20 to +300°C)	<b>Coefficient of Thermal Expansion CTE (10<sup>-6</sup>/°C):</b>

## Regulatory Compliance

<b>Compliant</b>	<b>RoHS 2015:</b>
<b>View</b>	<b>Certificate of Conformance:</b>
<b>Compliant</b>	<b>Reach 251:</b>

## Custom

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

Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

## Product Details

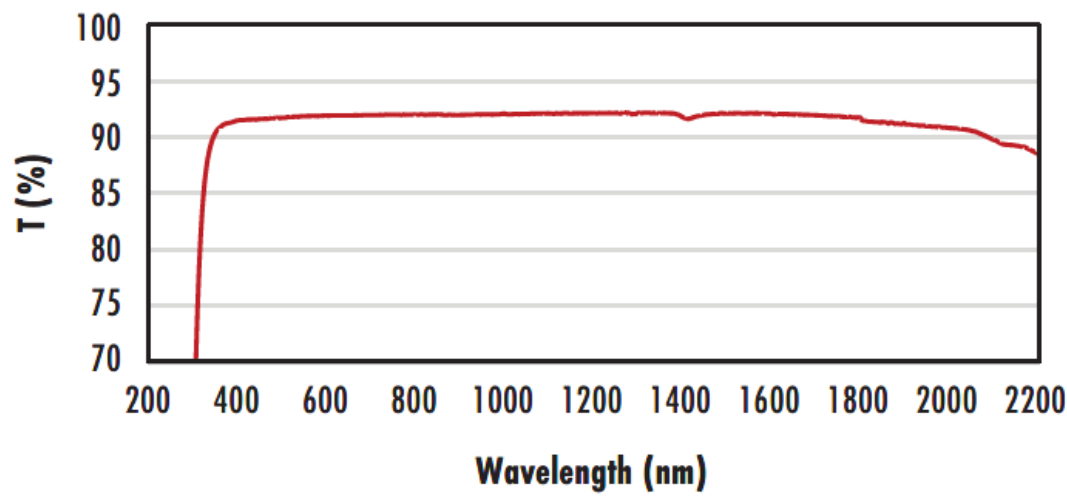
- Circular and Rectangular Sizes from 2mm to 200mm
- 8 Broadband Anti-Reflection Coating Options Available
- World's Largest Selection of Standard N-BK7 Windows
- Also Available with [Ultra-Thin N-BK7 Windows](#)

TECHSPEC® λ/4 N-BK7 Precision Windows are ideally suited for industrial and low-power laser applications. The high tolerance design yields minimal beam distortion and scatter. Broadband coating options extend the range of these precision windows through the visible and near-infrared spectra. TECHSPEC® λ/4 N-BK7 Precision Windows are offered in circular and rectangular sizes ranging from 2mm to 200mm.

**Note:** New additions to this product family may be specified with a transmitted wavefront distortion (TWD) specification instead of a surface flatness. For more information on the difference between these two specifications, see our application note on [Understanding Optical Windows](#).

## Technical Information

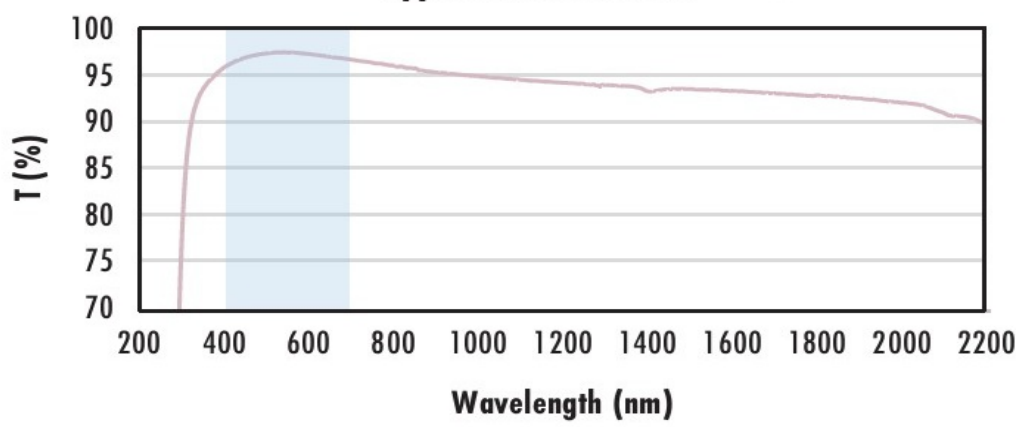
### Uncoated N-BK7 Typical Transmission



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

[Click Here to Download Data](#)

### N-BK7 with MgF<sub>2</sub> Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.

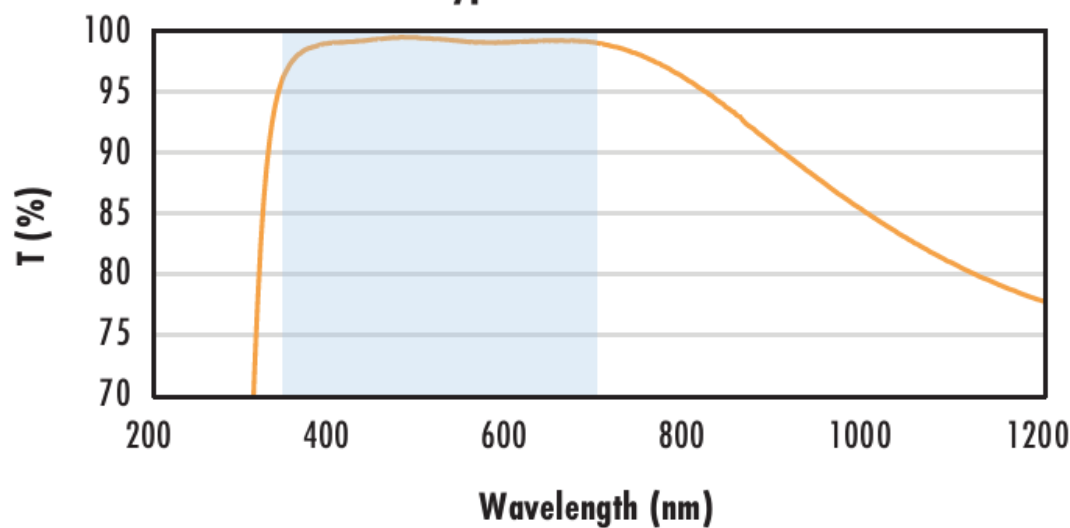
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

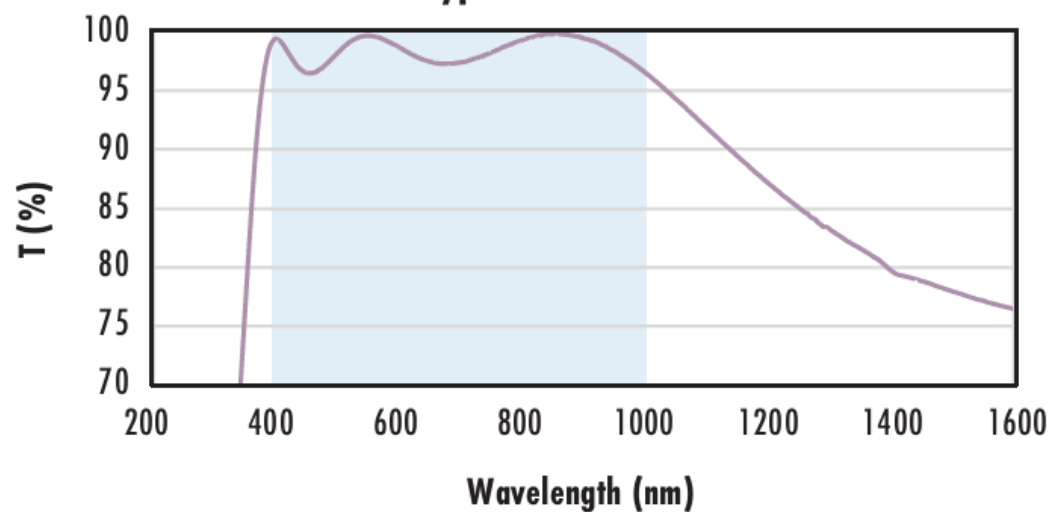
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

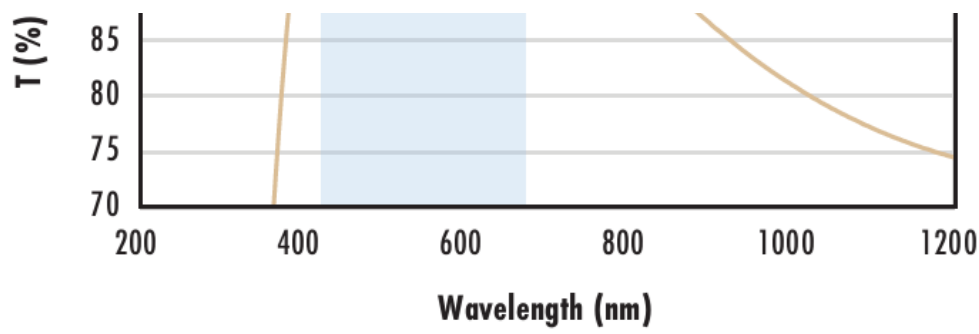
[Click Here to Download Data](#)

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



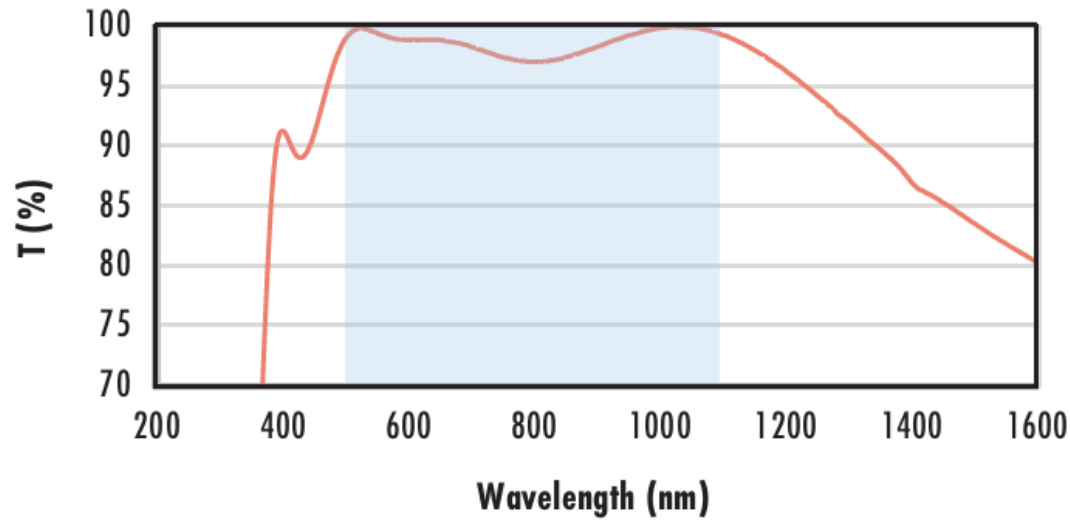
Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

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



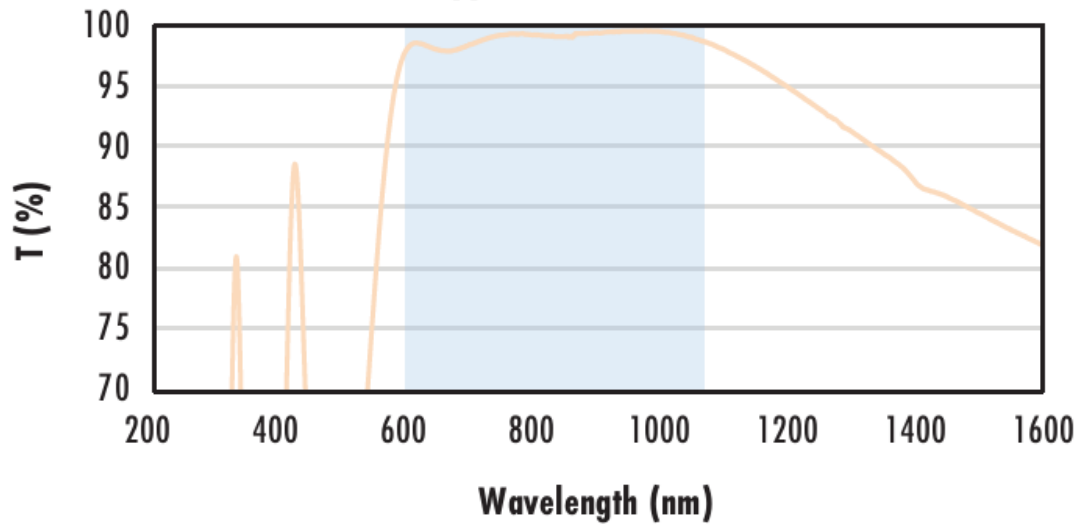
$R_{avg} \leq 0.4\%$  @ 425 - 675nm  
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)

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



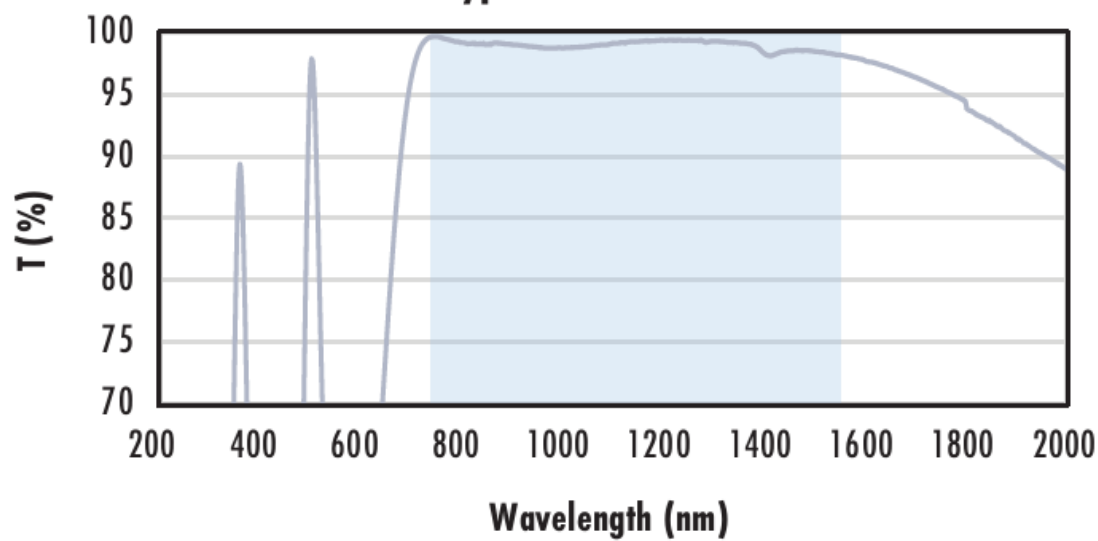
Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.  
 The blue shaded region indicates the coating design wavelength range, with the following specification:  
 $R_{abs} \leq 0.25\%$  @ 532nm  
 $R_{abs} \leq 0.25\%$  @ 1064nm  
 $R_{avg} \leq 1.0\%$  @ 500 - 1100nm  
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)

**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 - 1050nm  
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)

**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 - 800nm  
 $R_{abs} \leq 1.0\%$  @ 800 - 1550nm  
 $R_{avg} \leq 0.7\%$  @ 750 - 1550nm  
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)

**Compatible Mounts**