

TECHSPEC<sup>®</sup> 50mm Dia., 4mm Thick, NIR II Coated  $\lambda$ /4 N-BK7 Window



Stock #25-825 20+ In Stock

-

1

+

€150<sup>.00</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | €150,00 each                  |
| Qty 6-25       | €120,00 each                  |
| Qty 26-49      | €113,00 each                  |
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!

 Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Protective Window

Type:

Physical & Mechanical Properties

Protective as needed

Bevel:

90

Clear Aperture (%):

|                   |                          |
|-------------------|--------------------------|
| 45.00             | Clear Aperture CA (mm):  |
| 50.00 +0.00/-0.25 | Diameter (mm):           |
| 4.00 ±0.20        | Thickness (mm):          |
| Fine Ground       | Edges:                   |
| 610.00            | Knoop Hardness (kg/mm²): |
| <1                | Parallelism (arcmin):    |
| 0.21              | Poisson's Ratio:         |
| 82                | Young's Modulus (GPa):   |

Optical Properties

|                                                                                                                        |                                                       |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 64.17                                                                                                                  | Abbe Number (v <sub>d</sub> ):                        |
| NIR II (750-1550nm)                                                                                                    | Coating:                                              |
| R <sub>abs</sub> ≤1.5% @ 750 - 800nm<br>R <sub>abs</sub> ≤1.0% @ 800 - 1550nm<br>R <sub>avg</sub> ≤0.7% @ 750 - 1550nm | Coating Specification:                                |
| 1.516                                                                                                                  | Index of Refraction (n <sub>d</sub> ):                |
| N-BK7                                                                                                                  | Substrate:                                            |
| λ/4                                                                                                                    | Surface Flatness (P-V):                               |
| 60-40                                                                                                                  | Surface Quality:                                      |
| 750 - 1550                                                                                                             | Wavelength Range (nm):                                |
| 8 J/cm² @ 1064nm, 10ns                                                                                                 | Damage Threshold, By Design: <input type="checkbox"/> |

Material Properties

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

Regulatory Compliance

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

## Product Details

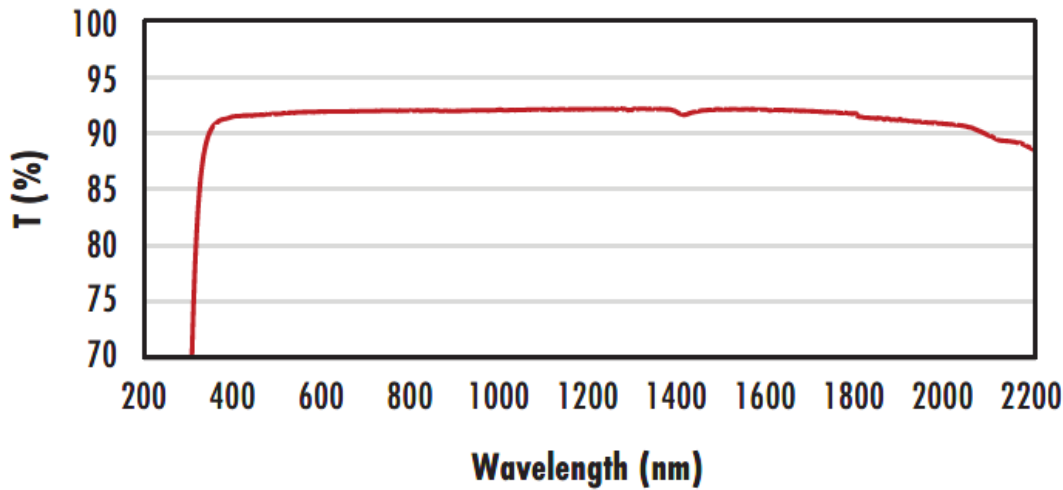
- Circular and Rectangular Sizes from 2mm to 200mm
- 8 Broadband Anti-Reflection Coating Options Available
- World's Largest Selection of Standard N-BK7 Windows
- Also Available with [Ultra-Thin N-BK7 Windows](#)

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

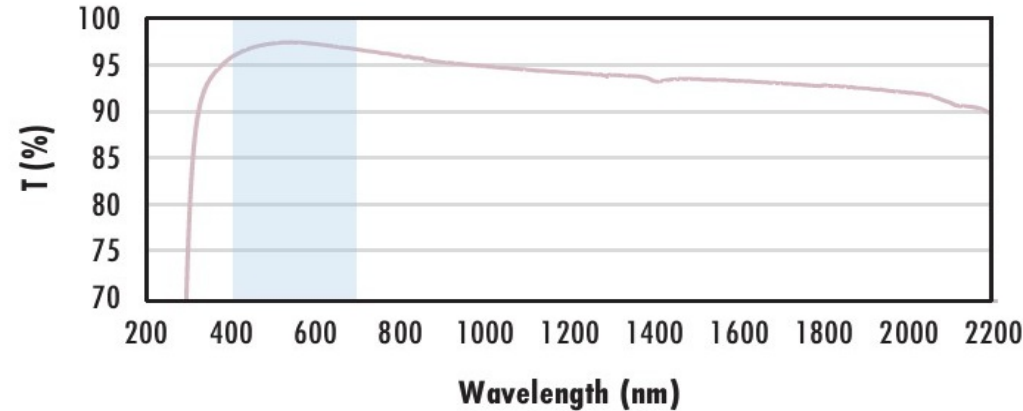
| N-BK7                               |
|-------------------------------------|
| Uncoated N-BK7 Typical Transmission |



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

[Click Here to Download Data](#)

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



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

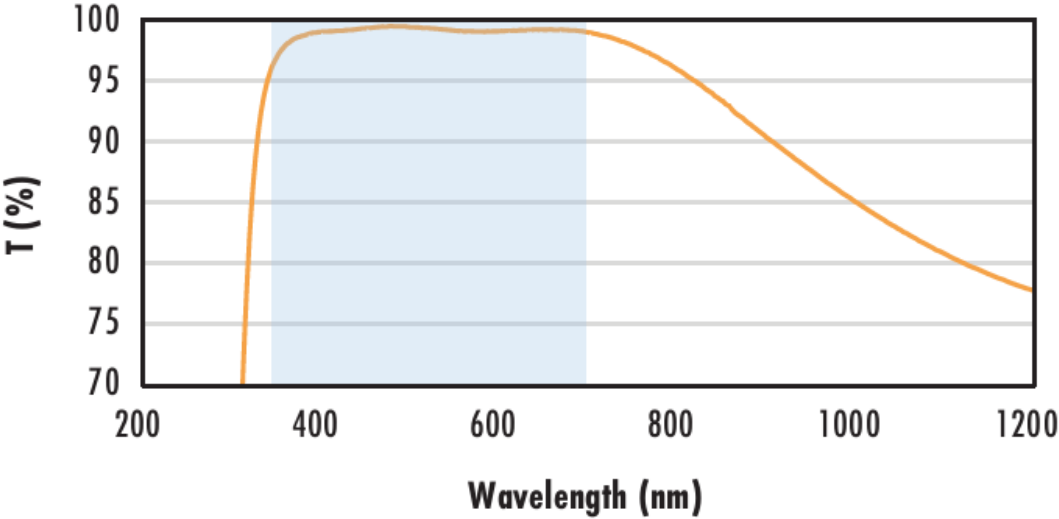
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

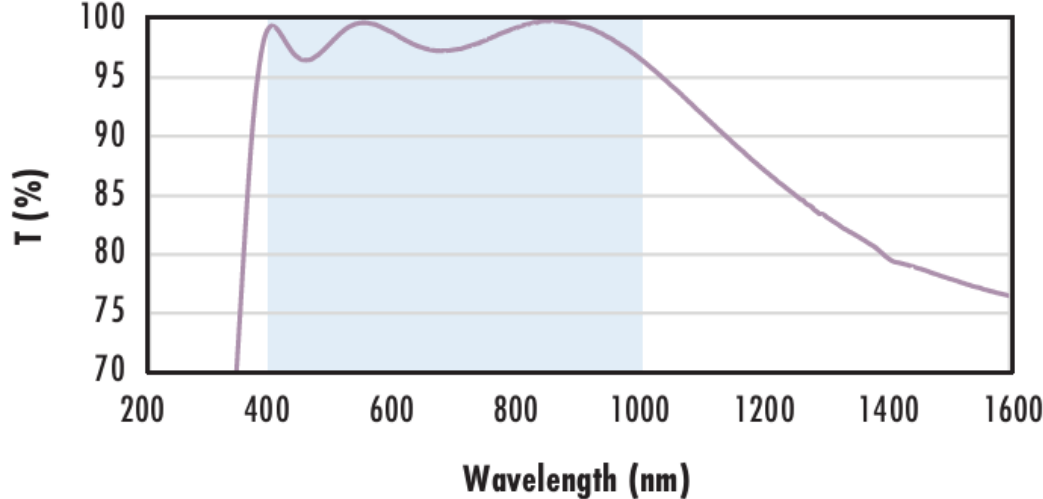
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

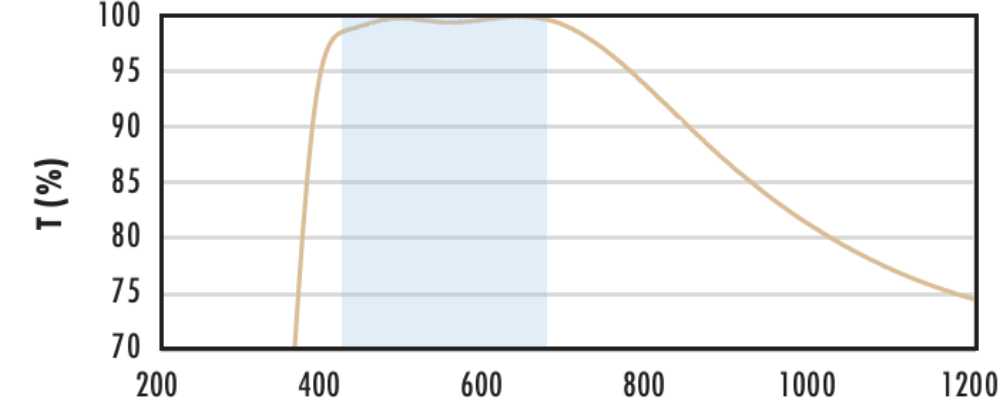
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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](#)

