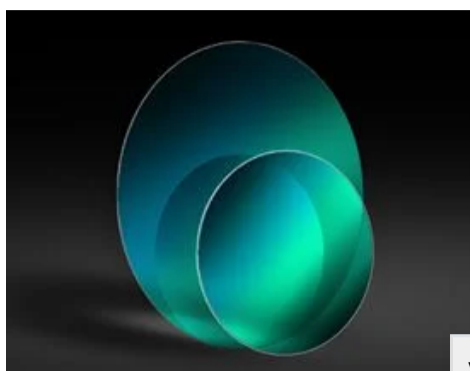


TECHSPEC® 50mm Diameter Uncoated, Ultra-Thin N-BK7 Window

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Ultra-Thin N-BK7 Windows

Stock #66-191 **20+ In Stock**

1 C\$287^{.00}

ADD TO CART

Volume Pricing	
Qty 1-5	C\$287.00 each
Qty 6-25	C\$231.00 each
Qty 26-49	C\$215.60 each
Need More?	Request Quote

Product Downloads	
STEP:step	PDF Drawing:pdf
IGES:igs	eDrawing:eprt
EO Spec Sheet	Download All

General

Type: Protective Window	Type of Window: Glass
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Physical & Mechanical Properties

Clear Aperture CA (mm): 45.00	Diameter (mm): 50.00 +0.00/-0.10
Thickness (mm): 0.20 ±0.025	Bevel: Protective as needed
Edges: Fine Ground	Parallelism (arcsec): <30
Poisson's Ratio: 0.21	Young's Modulus (GPa): 82
Knoop Hardness (kg/mm²): 610.00	

Optical Properties

Coating: Uncoated	Substrate: N-BK7
Index of Refraction (n_d): 1.516	Surface Quality: 40-20
Transmitted Wavefront, P-V: λ/2	Abbe Number (v_d): 64.17
Wavelength Range (nm): 350 - 2200	

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)
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Regulatory Compliance

RoHS 2015: [Compliant](#)

Reach 219: [Compliant](#)

Certificate of Conformance: [View](#)

Need different specs or modifications?

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

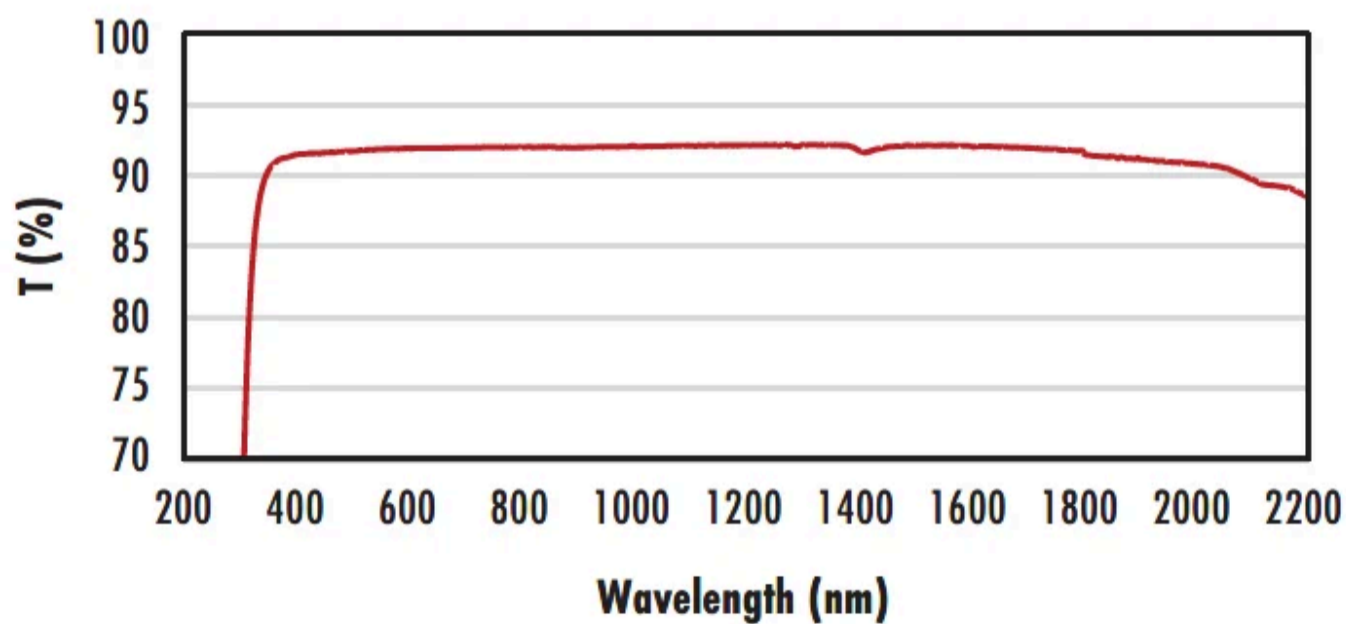
- Ultra-Thin 0.20mm Thickness
- Precision N-BK7 Substrate
- Extremely Lightweight

TECHSPEC® Ultra-Thin N-BK7 Windows are our thinnest windows available and are at least 1/10 the thickness of our traditional N-BK7 windows. Their extremely thin designs make them ideal for both weight and size-sensitive applications. Additionally, their high tolerance design yields minimal beam distortion and scatter. TECHSPEC® Ultra-Thin N-BK7 Windows are available uncoated or with a MgF2 anti-reflection coating. For custom sizes or coating options, please contact our [Sales Department](#).

Note: The Ultra-Thin N-BK7 Windows are very fragile. Handle these windows with care.

Technical Information

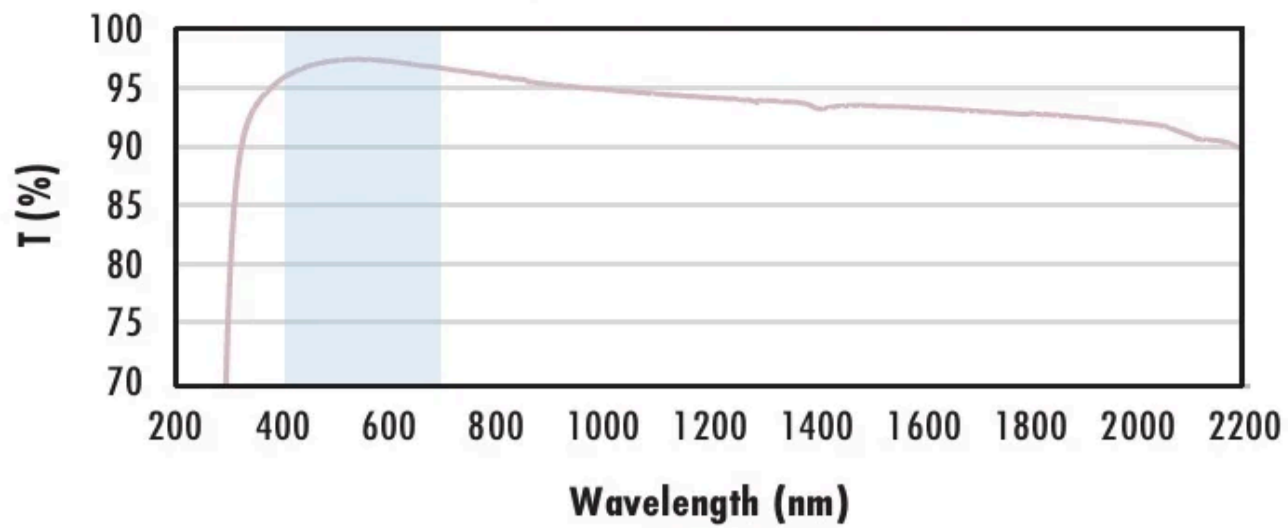
Uncoated N-BK7 Typical Transmission



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

[Click Here to Download Data](#)

N-BK7 with MgF₂ Coating Typical Transmission



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

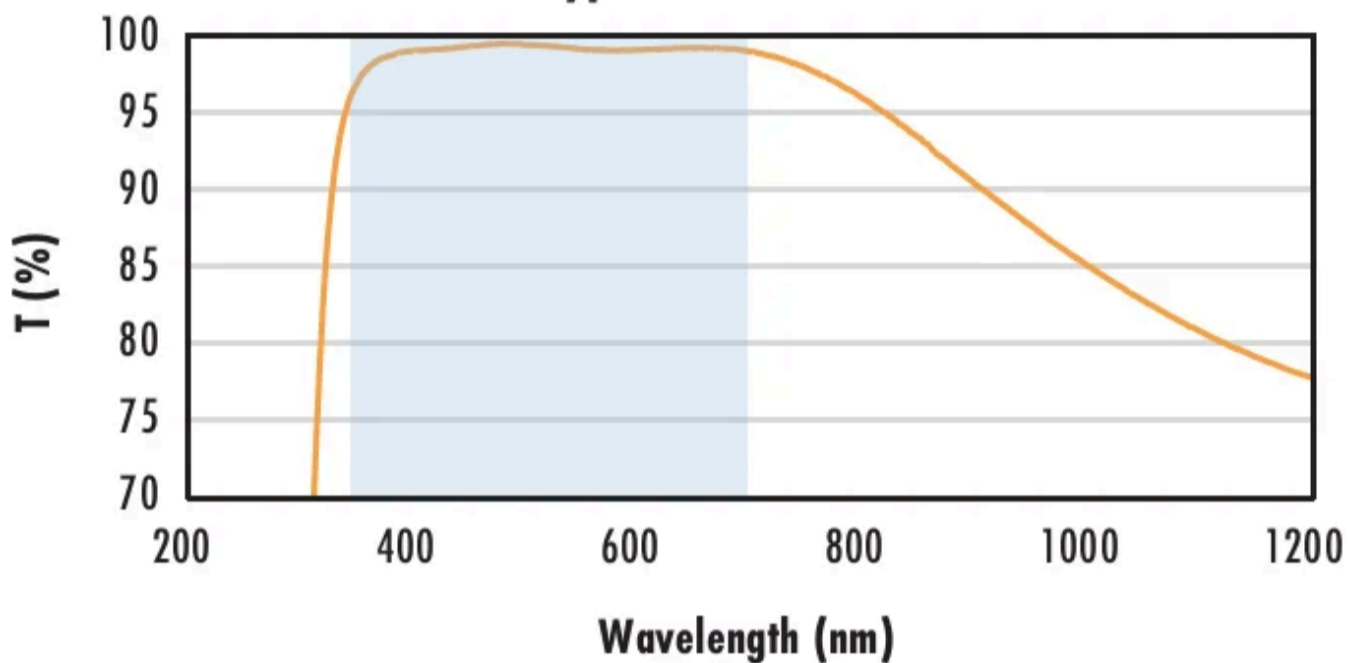
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

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:

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

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 0° (425–675nm) coating at 0° AOI.

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

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

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:

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

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

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

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 I (600 – 1050nm) coating at 0° AOI.

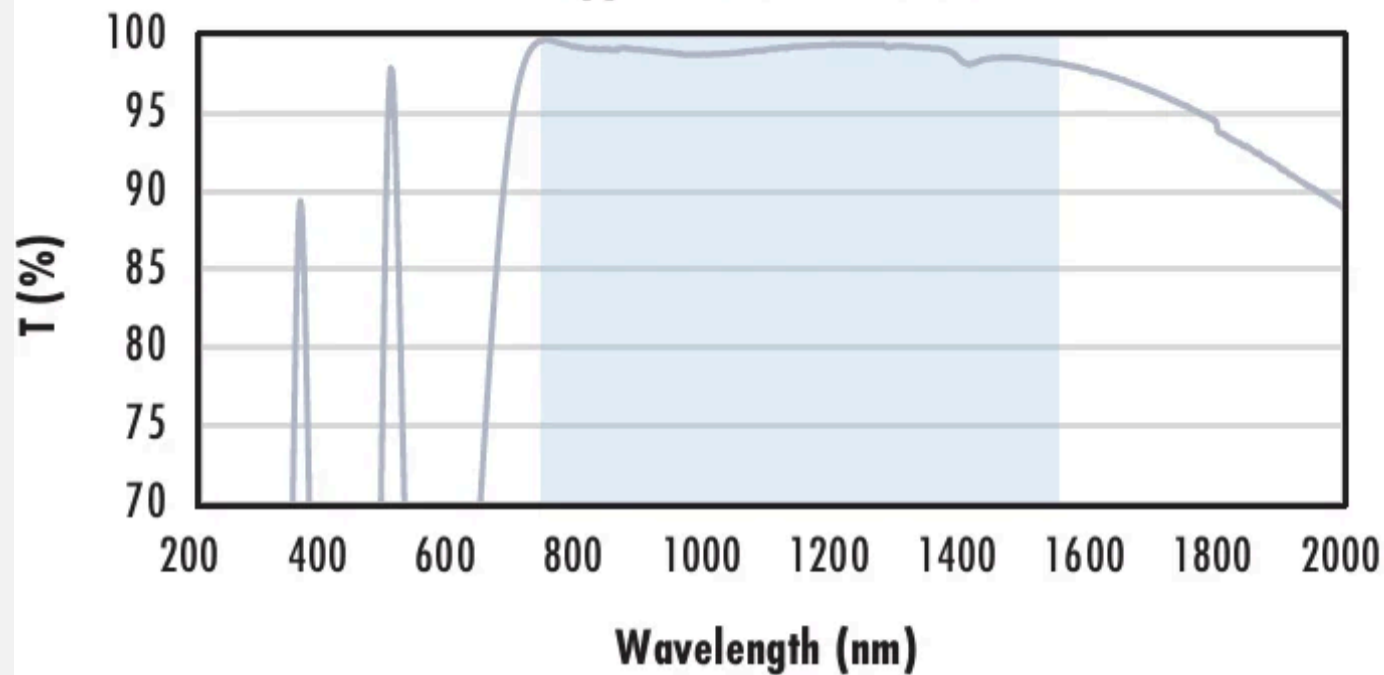
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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 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](#)

Frequently Purchased Together



#34-427 - 50mm Dia., 1mm Thick, Uncoated $\lambda/4$ N-BK7 Window
C\$155.40

Qty



#34-475 - 50mm Dia. White Diffusing Glass
C\$63.35

Qty



#32-740 - 41 x 63.5mm AR Coated Float Glass Window
C\$38.15

Qty


















#32-741 - 48 x 84mm AR Coated Float Glass Window
C\$41.65

Qty

Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
MORE+	50.0mm Optic Dia., Optic Mount	Fixed		#64-567	C\$68.95 Request Quote	1 In Stock <input type="text" value="1"/> <input type="button" value="Add to Cart"/>
MORE+	50.0mm Optic Dia., Optic Mount	Fixed		#64-568	C\$68.95 Request Quote	7 In Stock <input type="text" value="1"/> <input type="button" value="Add to Cart"/>
MORE+	10.0 - 60.0mm Optic Height, Metric Bar-Type Optic Holder	Fixed		#55-530	C\$151.20 Request Quote	CONTACT US <input type="text" value="1"/> <input type="button" value="Add to Cart"/>
MORE+	7.0 - 67.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-669	C\$162.40 Request Quote	20+ In Stock <input type="text" value="1"/> <input type="button" value="Add to Cart"/>
MORE+	8.0 - 118.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-666	C\$168.00 Request Quote	20+ In Stock <input type="text" value="1"/> <input type="button" value="Add to Cart"/>
MORE+	50.0/50.8mm Optic Dia., Optical Cell Assembly	Fixed		#36-465 CLEARANCE	C\$179.93 Request Quote	2 In Stock <input type="text" value="1"/> <input type="button" value="Add to Cart"/>

	Title	Type	Compare	Stock Number	Price	Buy
 	50.0/50.8mm Optic Dia., X-Y Translating Optic Mount	Adjustable - Linear (XY)		#62-957	C\$431.20 Request Quote	1 In Stock <input type="text" value="1"/> 
 	5.0 - 100.0mm Optic Dia., Self-Centering Jaw Clamp	Fixed		#16-078	C\$574.00 Request Quote	CONTACT US <input type="text" value="1"/> 
 	50.0/50.8mm Optic Dia., Precision Gimbal Mount	Adjustable - Gimbal		#55-000	C\$714.00 Request Quote	7 In Stock <input type="text" value="1"/> 
 	50.0/50.8mm Optic Dia., X-Y-Z Translating Optic Mount	Adjustable - Linear (XYZ)		#62-960	C\$847.00 Request Quote	20+ In Stock <input type="text" value="1"/> 
 	50.0/50.8mm Optic Dia., 5 Axes Optical Mount	Adjustable - Linear (XYZ) & Tip-Tilt		#13-778	C\$1,176.00 Request Quote	10 In Stock <input type="text" value="1"/> 

Check out our full selection of mounts [here](#).


Resources

Media Type

- Application Note
- Technical Tool
- Video
- Glossary
- FAQ

 APPLICATION NOTE

Anti-Reflection (AR) Coatings

 APPLICATION NOTE

An Introduction to Optical Coatings

 TECHNICAL TOOL

Beam Displacement Calculator

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Understanding Optical Windows

 VIDEO

Optical Windows Review

 APPLICATION NOTE

Optical Glass

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