

TECHSPEC® 12.5mm Dia., 1mm Thick, Uncoated λ/4 N-BK7 Window



Stock #20-491 [CONTACT US](#)

1 £56^{.00}

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Volume Pricing	
Qty 1-5	£56.00 each
Qty 6-25	£44.80 each
Qty 26-49	£42.00 each
Need More?	Request Quote

Prices shown are exclusive of VAT/local taxes

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): 11.25	Diameter (mm): 12.50 +0.00/-0.25
Thickness (mm): 1.00 ±0.20	Parallelism (arcmin): <1
Bevel: Protective as needed	Clear Aperture (%): 90
Edges: Fine Ground	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: 60-40
Transmitted Wavefront, P-V: λ/4	Abbe Number (v_d): 64.17
Wavelength Range (nm): 350 - 2200	

Material Properties

Density (g/cm³): 2.51	Coefficient of Thermal: 7.1 (-30 to +70°C)
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Regulatory Compliance

RoHS 2015: [Compliant](#)

Certificate of Conformance: [View](#)

Reach 253: [Compliant](#)

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

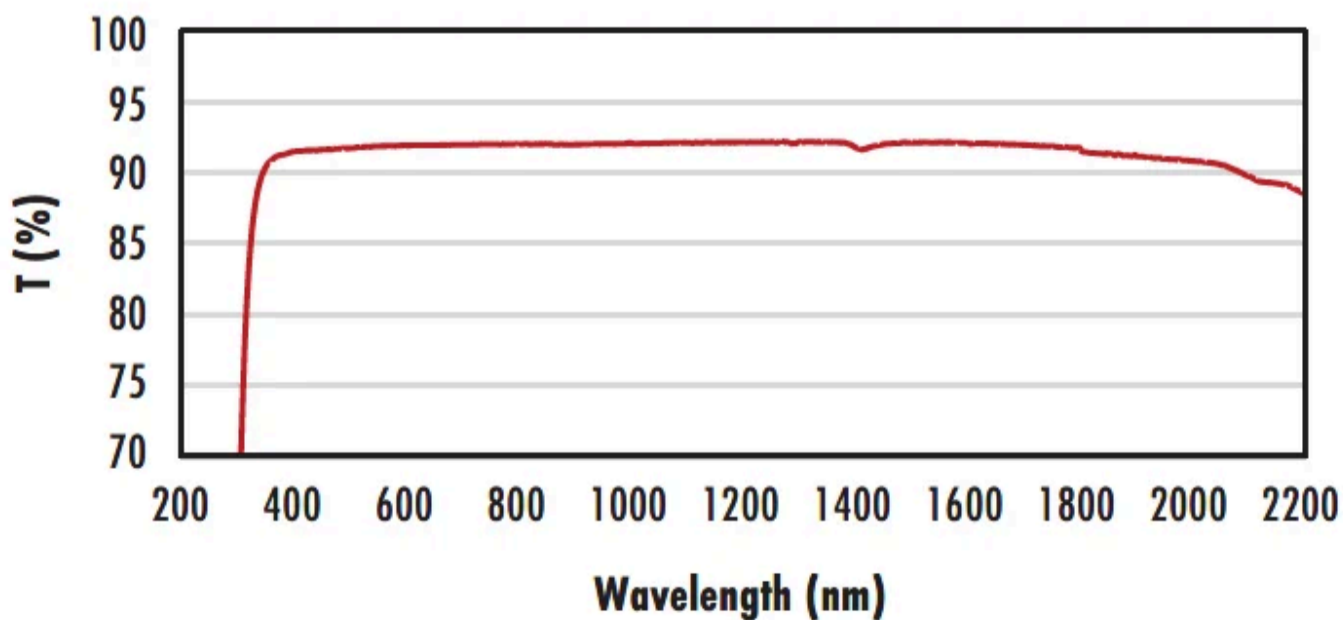
- Circular and Rectangular Sizes from 2mm to 200mm
- 8 Broadband Anti-Reflection Coating Options Available
- World's Largest Selection of Standard N-BK7 Windows
- Also Available with [Ultra-Thin N-BK7 Windows](#)

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

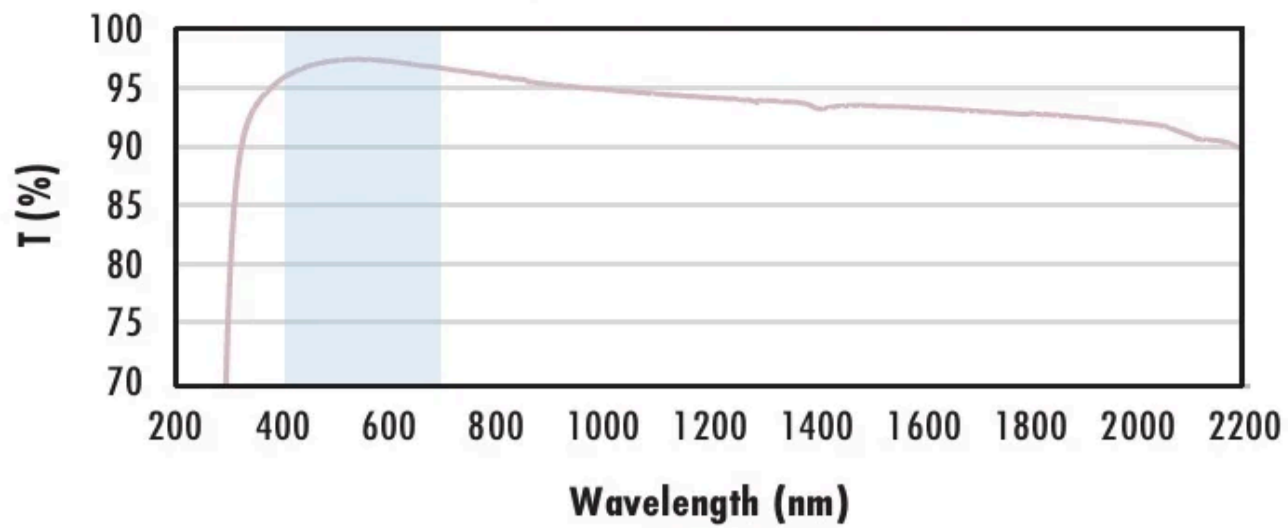
Uncoated N-BK7 Typical Transmission



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

[Click Here to Download Data](#)

N-BK7 with MgF₂ Coating Typical Transmission



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

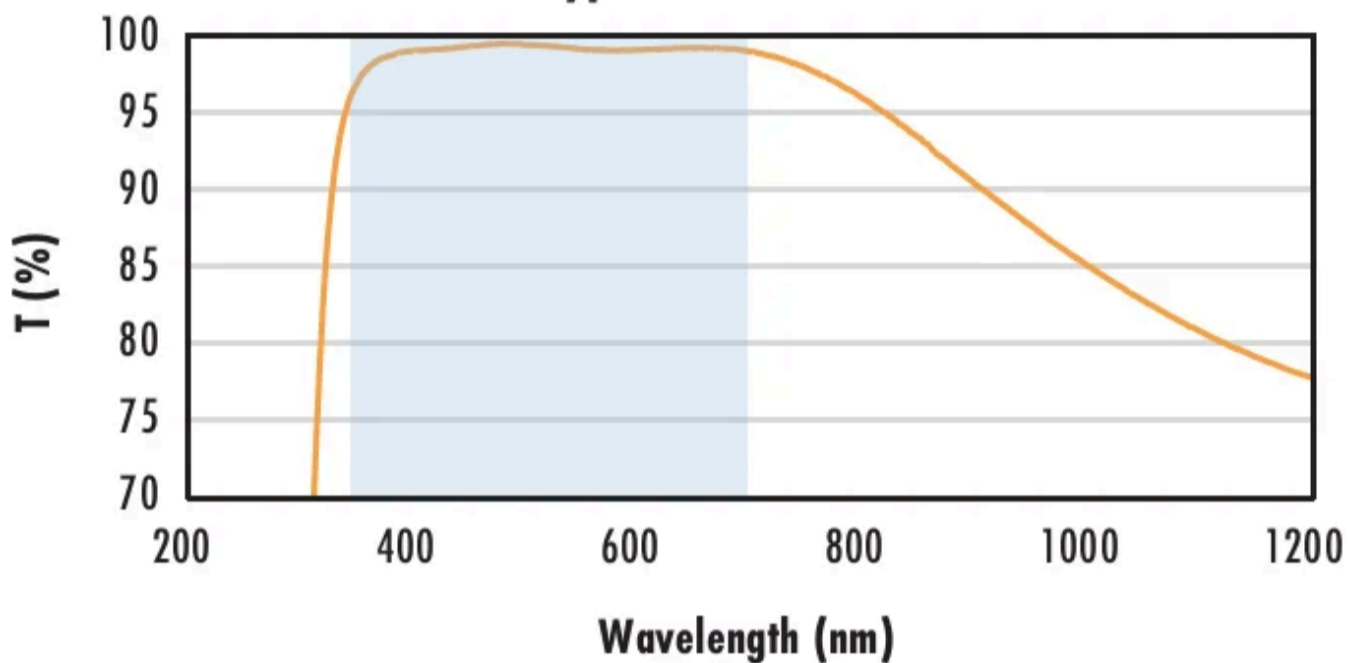
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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 w 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.

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N-BK7 with VIS-NIR Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window w VIS-NIR (400-1000nm) coating at 0° AOI.

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

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

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

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

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 0° (425–675nm) coating at 0° AOI.

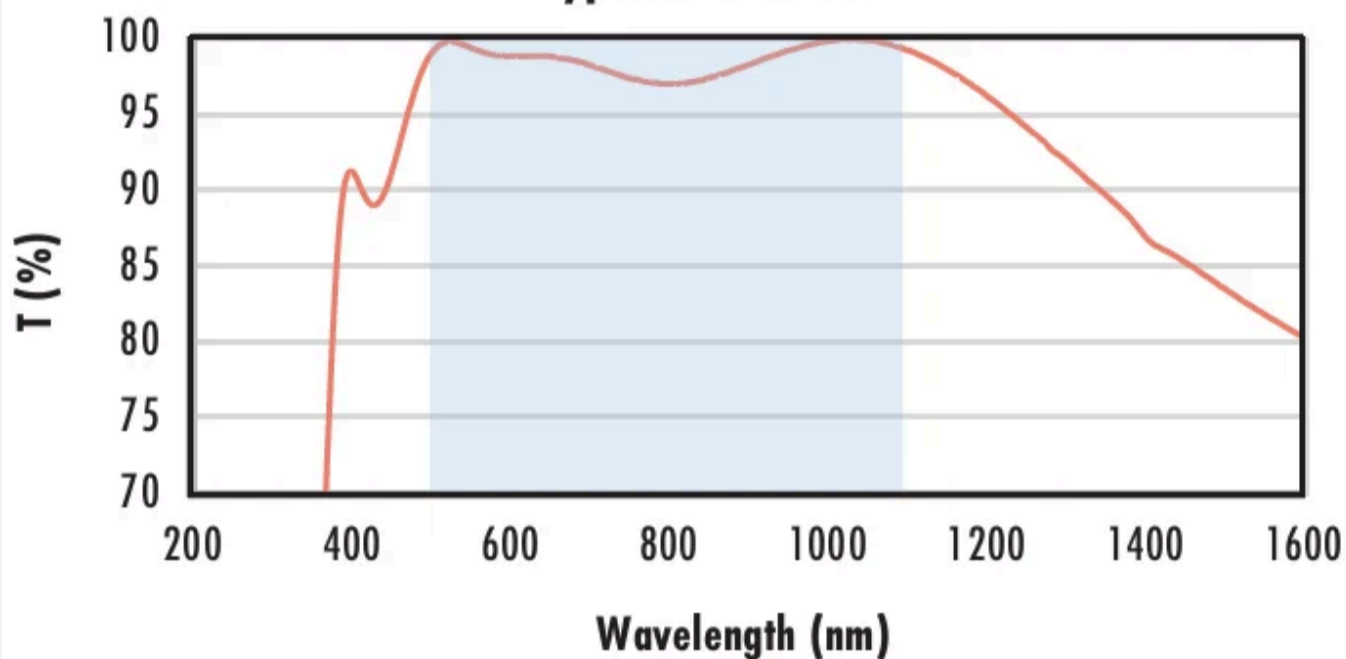
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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](#)

Related Products



Cage System Optical Lens Mounts



C, S, and T-Mount Circular Optic Mounts



PUROSOL™ Optical Cleaner



λ/10 UV Fused Silica Windows

Frequently Purchased Together



#27-402 - 12.5mm Diameter, 4-6λ Mirror
£15.20

Qty



#45-575 - 15mm Dia., 3mm Thick, Uncoated λ/4 N-BK7 Window
£58.00

Qty



#49-311 - 6.25mm Dia. x 50mm FL, VIS-NIR Coated, Achromatic Lens
£64.80

Qty






























#49-326 - 12.5mm Dia. x 40mm FL, VIS-NIR Coated, Achromatic Lens
£77.20

Qty

Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
	5.0 - 25.0mm Optic Height, Metric Bar-Type Optic Holder	Fixed		#55-529	£81.60 Request Quote	20+ In Stock <input type="text"/>

	Title	Type	Compare	Stock Number	Price	Buy
 	7.0 - 40.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-676	£84.80 Request Quote	20+ In Stock <input type="text" value="1"/> 
 	10.0 - 60.0mm Optic Height, Metric Bar-Type Optic Holder	Fixed		#55-530	£86.40 Request Quote	CONTACT US <input type="text" value="1"/> 
 	7.0 - 67.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-669	£92.80 Request Quote	20+ In Stock <input type="text" value="1"/> 
 	8.0 - 118.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-666	£96.00 Request Quote	20+ In Stock <input type="text" value="1"/> 
 	4.0 - 36.0mm Optic Dia., Self-Centering Jaw Clamp	Fixed		#16-077	£125.60 Request Quote	5 In Stock <input type="text" value="1"/> 
 	12.5/12.7mm Optic Dia., X-Y Translating Optic Mount	Adjustable - Linear (XY)		#62-955	£208.80 Request Quote	5 In Stock <input type="text" value="1"/> 
 	5.0 - 100.0mm Optic Dia., Self-Centering Jaw Clamp	Fixed		#16-078	£328.00 Request Quote	CONTACT US <input type="text" value="1"/> 
 	12.5/12.7mm Optic Dia., Precision Gimbal Mount	Adjustable - Gimbal		#84-640	£336.80 Request Quote	7 In Stock <input type="text" value="1"/> 
 	12.5/12.7mm Optic Dia., X-Y-Z Translating Optic Mount	Adjustable - Linear (XYZ)		#62-958	£343.20 Request Quote	5 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

APPLICATION NOTE

Understanding Optical Windows

VIDEO

Optical Windows Review

APPLICATION NOTE

Optical Glass

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