

# TECHSPEC® 50mm Dia., 2mm Thick, MgF<sub>2</sub> Coated $\lambda/4$ N-BK7 Window



Stock #37-011 [CONTACT US](#)

1 **MRP ₹13,519**

Price inclusive of all taxes

**ADD TO CART**

Volume Pricing	
Qty 1-5	₹13,519 each
Qty 6-25	₹10,796 each
Qty 26-49	₹10,089 each
Need More?	<a href="#">Request Quote</a>

Product Downloads

- STEP:step
- PDF Drawing:pdf
- IGES:igs
- eDrawing:eprt
- EO Spec Sheet
- [Download All](#)

## General

<b>Type:</b> Protective Window	<b>Type of Window:</b> Glass
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## Physical & Mechanical Properties

<b>Clear Aperture CA (mm):</b> 45.00	<b>Diameter (mm):</b> 50.00 +0.0/-0.25
<b>Thickness (mm):</b> 2.00 ±0.20	<b>Parallelism (arcmin):</b> <1
<b>Bevel:</b> Protective as needed	<b>Clear Aperture (%):</b> 90
<b>Edges:</b> Fine Ground	<b>Poisson's Ratio:</b> 0.21
<b>Young's Modulus (GPa):</b> 82	<b>Knoop Hardness (kg/mm<sup>2</sup>):</b> 610.00

## Optical Properties

<b>Coating:</b> MgF <sub>2</sub> (400-700nm)	<b>Substrate:</b> <sup>①</sup> <b>N-BK7</b>
<b>Index of Refraction (n<sub>d</sub>):</b> 1.516	<b>Surface Quality:</b> 60-40
<b>Abbe Number (v<sub>d</sub>):</b> 64.17	<b>Coating Specification:</b> R <sub>avg</sub> ≤1.75% @ 400 - 700nm
<b>Wavelength Range (nm):</b> 400 - 700	<b>Surface Flatness (P-V):</b> $\lambda/4$
<b>Damage Threshold, Reference:</b> <sup>①</sup> 10 J/cm <sup>2</sup> @ 532nm, 10ns	

## Material Properties

**Density (g/cm<sup>3</sup>):** 2.51

**Coefficient of Thermal Expansion CTE (10<sup>-6</sup>/°C):** 7.1 (-30 to +70°C)  
8.3 (+20 to +300°C)

## Regulatory Compliance

**RoHS 2015:** **Compliant**

**Certificate of Conformance:** **View**

**Reach 253:** **Compliant**

**Country of Origin:** United States

**Imported By:** Edmund Optics India Private Limited  
267, Greystone Building, Second Floor, 6th Cross Rd, Binnamangala, Stage 1, Indiranagar, Bengaluru, Karnataka, India 560038  
Phone: +91-80-6845 0000

## 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

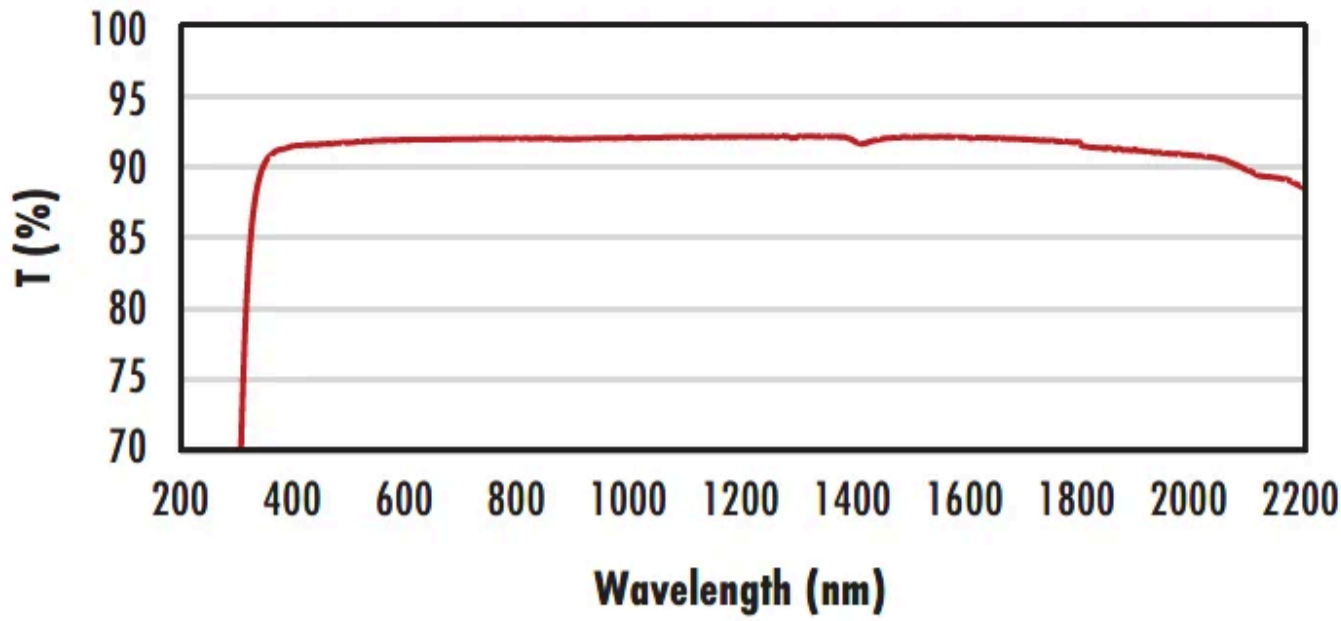
- Circular and Rectangular Sizes from 2mm to 200mm
- 8 Broadband Anti-Reflection Coating Options Available
- World's Largest Selection of Standard N-BK7 Windows
- Also Available with **Ultra-Thin N-BK7 Windows**

TECHSPEC®  $\lambda/4$  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®  $\lambda/4$  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

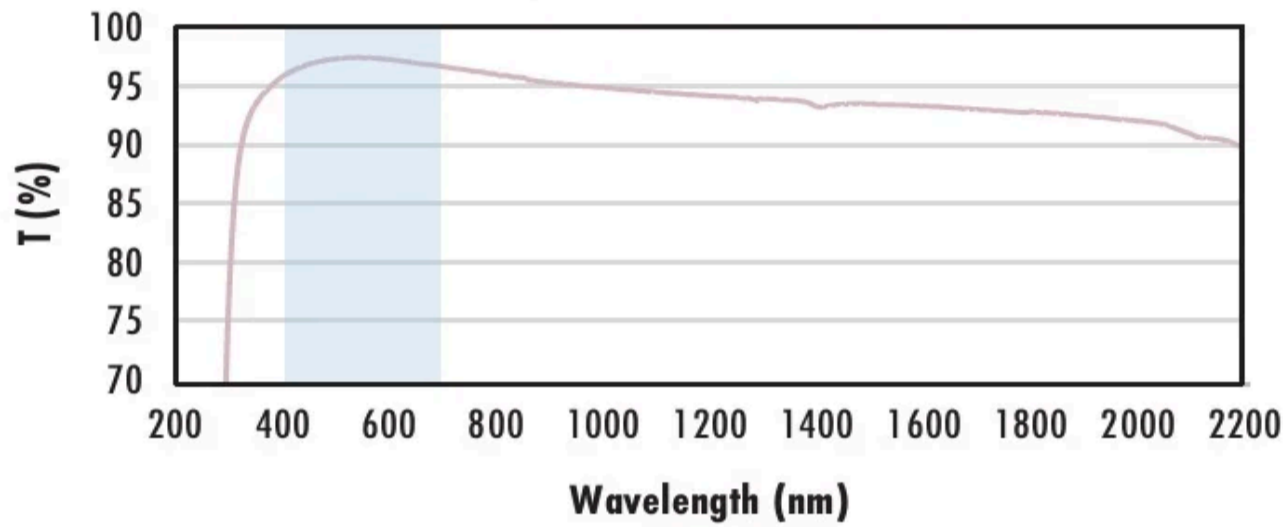
### Uncoated N-BK7 Typical Transmission



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.

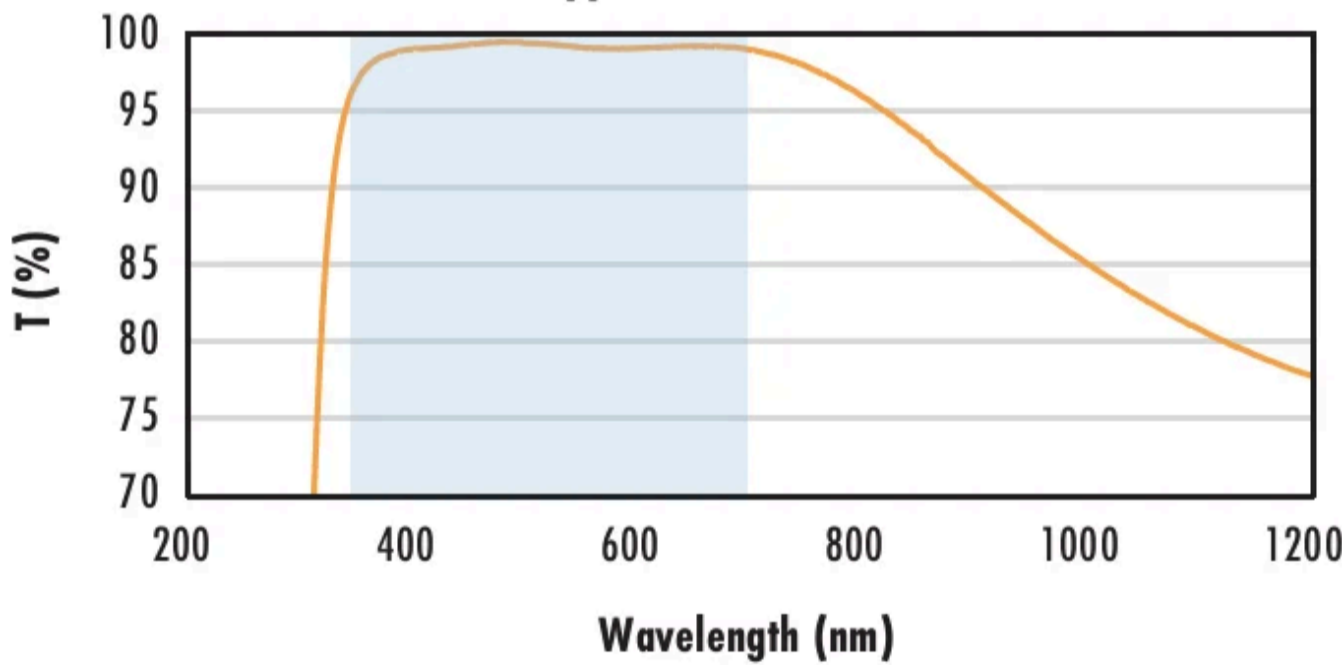
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

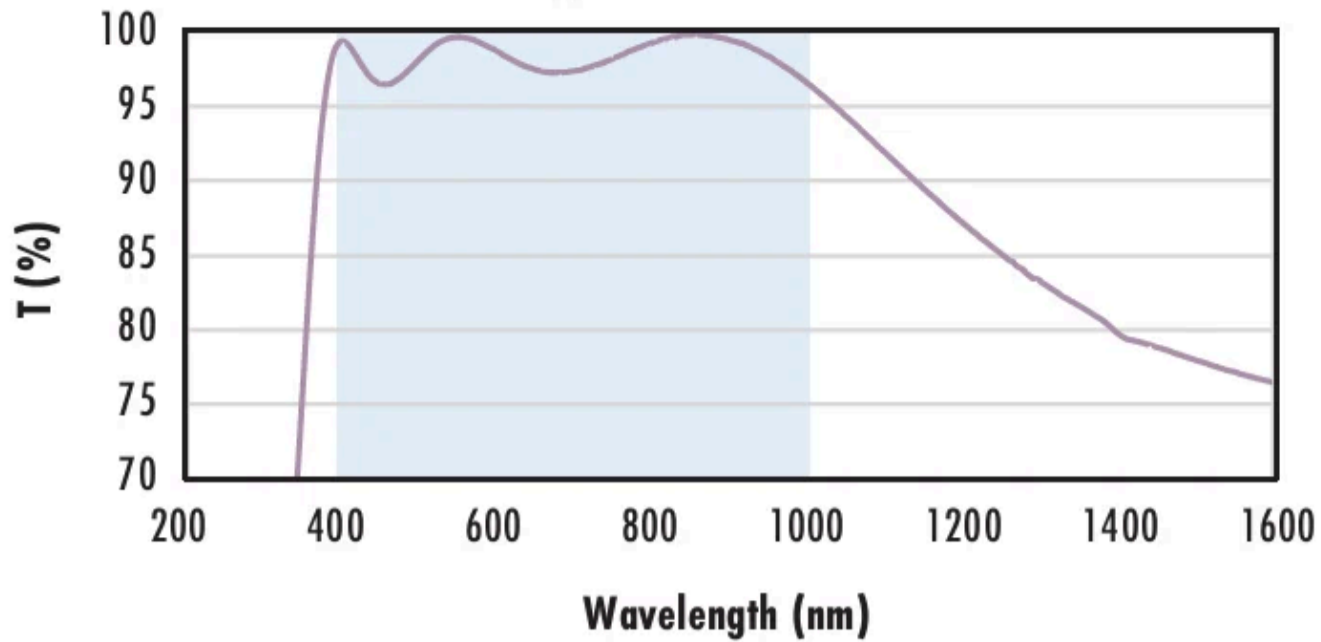
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

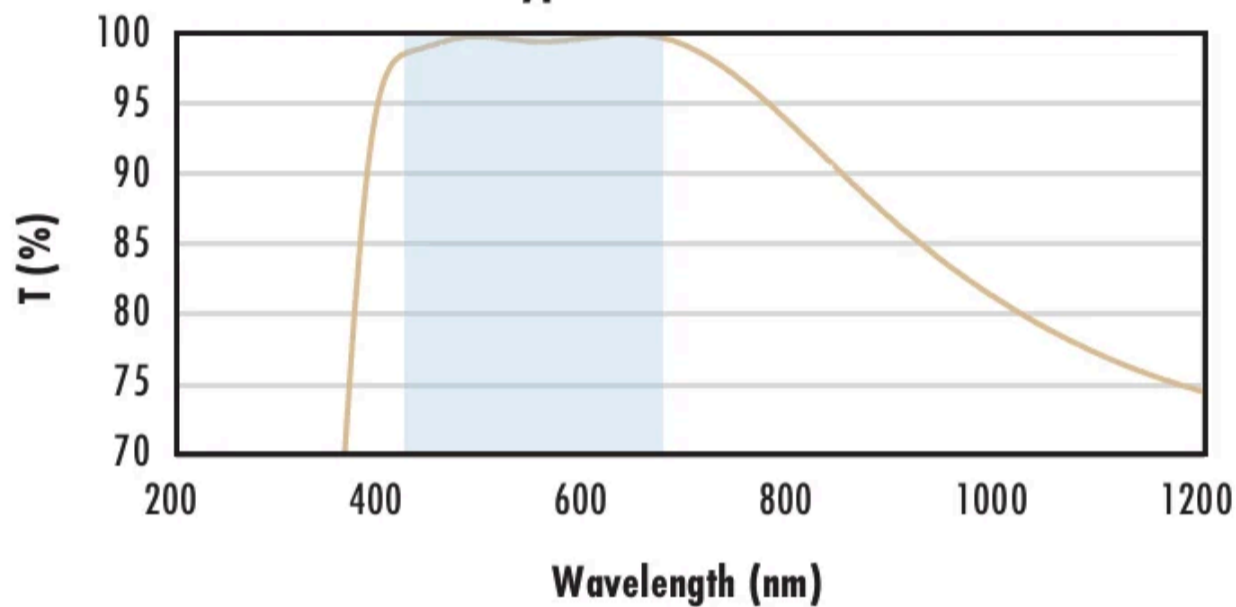
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

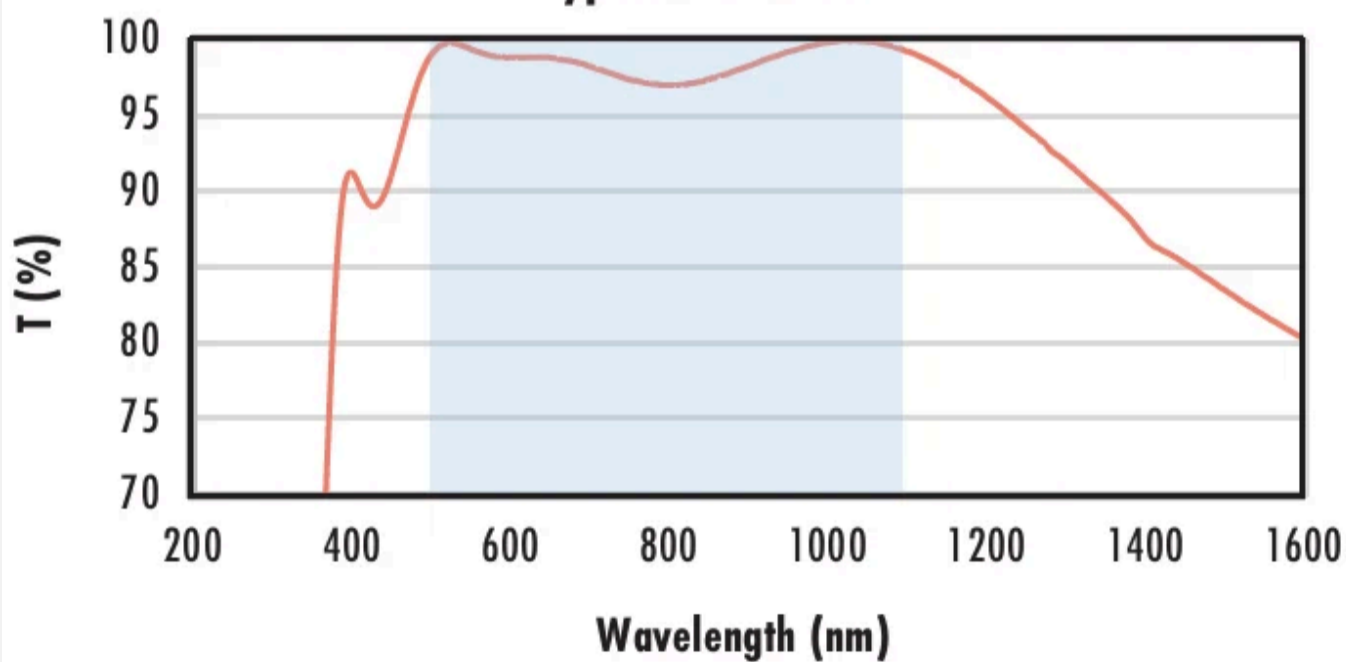
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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 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:

$$R_{abs} \leq 1.5\% \text{ @ } 750 - 800\text{nm}$$

$$R_{abs} \leq 1.0\% \text{ @ } 800 - 1550\text{nm}$$

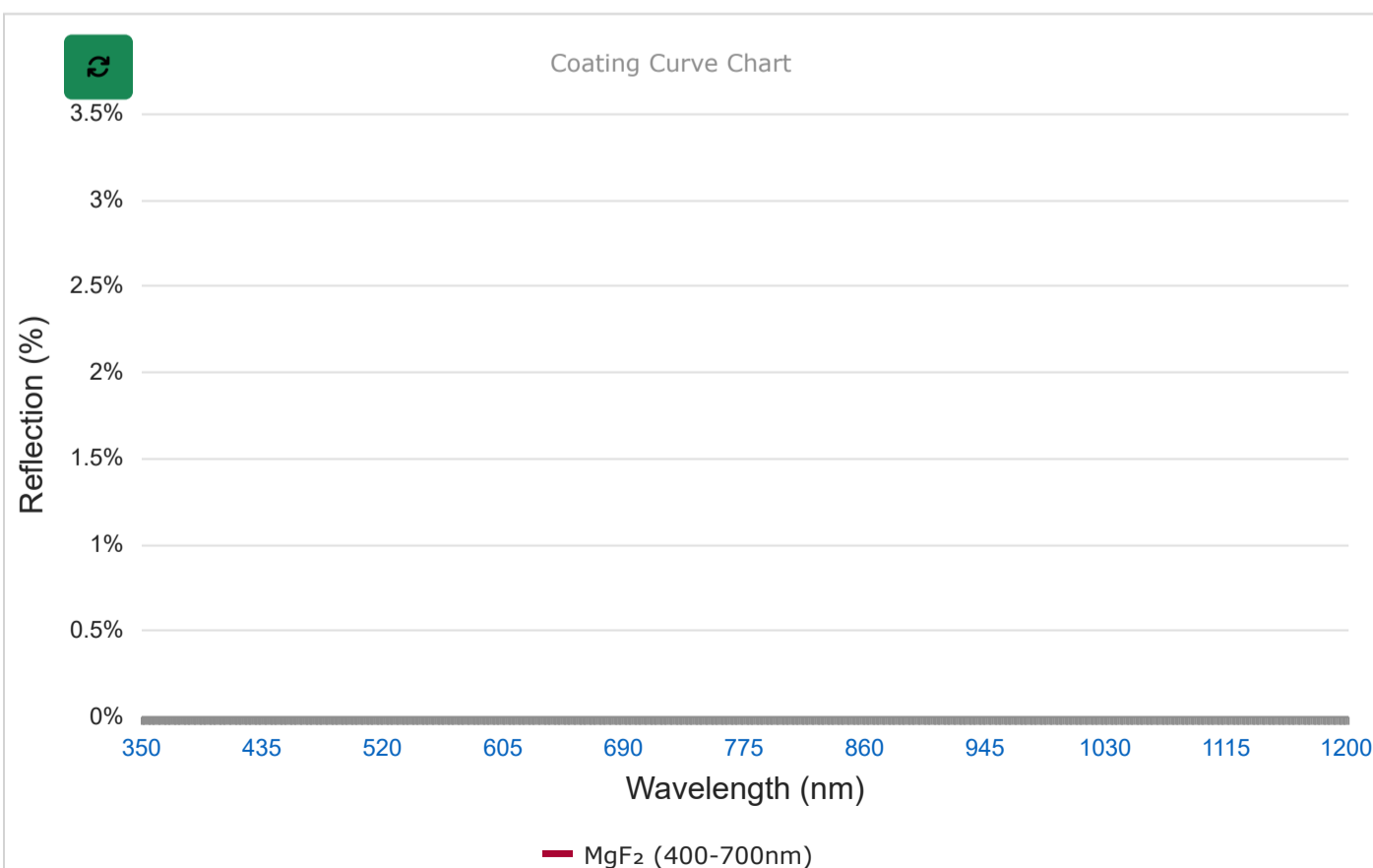
$$R_{avg} \leq 0.7\% \text{ @ } 750 - 1550\text{nm}$$

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

[Click Here to Download Data](#)

## Coating Curves

MgF<sub>2</sub> (400-700nm)



SHIFT + SELECT an area on CURVE to zoom

## Related Products



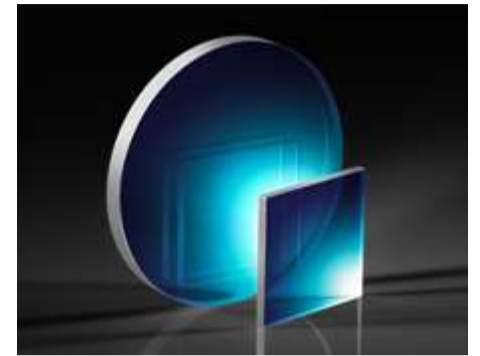
Cage System Optical Lens Mounts



C, S, and T-Mount Circular Optic Mounts



PUROSOL™ Optical Cleaner



λ/10 UV Fused Silica Windows

## Frequently Purchased Together



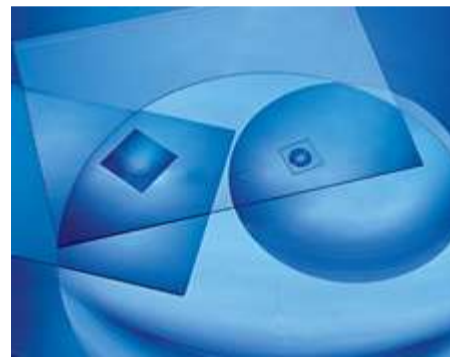
#32-328 - 5mm, Uncoated, N-BK7 Right Angle Prism  
₹5,246

Qty



#32-525 - 2mm, Uncoated, N-BK7 Right Angle Prism  
₹9,635

Qty



#32-598 - 11.0" x 11.0", 9.2" Focal Length, Fresnel  
₹15,840

Qty


















#34-427 - 50mm Dia., 1mm Thick, Uncoated λ/4 N-BK7 Window  
₹11,199

Qty

## Compatible Mounts

	Title	Type	Compare	Stock Number	Price	Buy
	50.0mm Optic Dia., Optic Mount	Fixed		#64-567	₹4,969 Request Quote	4 In Stock <input type="text" value="1"/>
	50.0mm Optic Dia., Optic Mount	Fixed		#64-568	₹4,969 Request Quote	7 In Stock <input type="text" value="1"/>
	10.0 - 60.0mm Optic Height, Metric Bar-Type Optic Holder	Fixed		#55-530	₹10,896 Request Quote	CONTACT US <input type="text" value="1"/>
	7.0 - 67.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-669	₹11,703 Request Quote	6 In Stock <input type="text" value="1"/>
	8.0 - 118.0 Optic Height, English Bar-Type Optic Holder	Fixed		#03-666	₹12,107 Request Quote	10 In Stock <input type="text" value="1"/>
	50.0/50.8mm Optic Dia., Optical Cell Assembly	Fixed		#36-465 CLEARANCE	₹12,739 Request Quote	2 In Stock <input type="text" value="1"/>

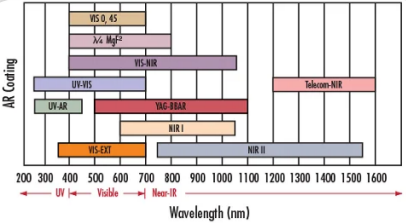
	Title	Type	Compare	Stock Number	Price	Buy
 	50.0/50.8mm Optic Dia., X-Y Translating Optic Mount	Adjustable - Linear (XY)		#62-957	₹31,074 Request Quote	1 In Stock <input type="text" value="1"/> 
 	5.0 - 100.0mm Optic Dia., Self-Centering Jaw Clamp	Fixed		#16-078	₹41,365 Request Quote	CONTACT US <input type="text" value="1"/> 
 	50.0/50.8mm Optic Dia., Precision Gimbal Mount	Adjustable - Gimbal		#55-000	₹51,454 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	₹61,039 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	₹84,748 Request Quote	10 In Stock <input type="text" value="1"/> 

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

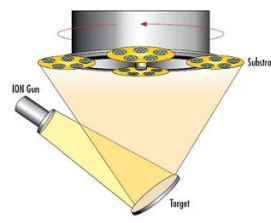
## Resources

## Media Type

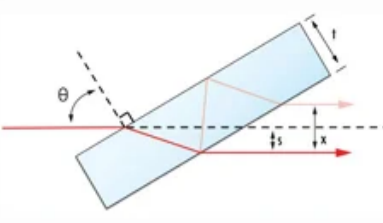
- Application Note
- Technical Tool
- Video
- Glossary
- FAQ



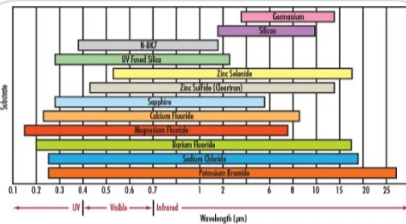
**APPLICATION NOTE**  
**Anti-Reflection (AR) Coatings**




**APPLICATION NOTE**  
**An Introduction to Optical Coatings**



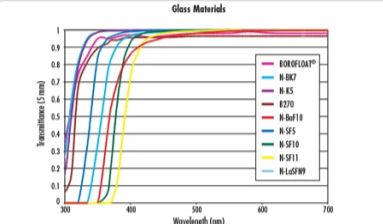
**TECHNICAL TOOL**  
**Beam Displacement Calculator**



**APPLICATION NOTE**  
**Understanding Optical Windows**



**VIDEO**  
**Optical Windows Review**



**APPLICATION NOTE**  
**Optical Glass**

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