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**TECHSPEC® 20.0mm Diameter x -100 FL, NIR I Coated, Plano-Concave Lens**



Stock #22-247 **4 In Stock**

[Other Coating Options](#)

⊖ 1 ⊕ ₹3,503

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Volume Pricing	
Qty 1-9	₹3,503 each
Qty 10-25	₹3,153 each
Qty 26-49	₹2,803 each
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**General**

Plano-Concave Lens **Type:**

**Physical & Mechanical Properties**

20.00 +0.0/-0.025 **Diameter (mm):**

Protective as needed	<b>Bevel:</b>
3.50	<b>Center Thickness CT (mm):</b>
±0.10	<b>Center Thickness Tolerance (mm):</b>
<1	<b>Centering (arcmin):</b>
19.00	<b>Clear Aperture CA (mm):</b>
4.42	<b>Edge Thickness ET (mm):</b>

## Optical Properties

-100.00	<b>Effective Focal Length EFL (mm):</b>
<a href="#">N-BK7</a>	<b>Substrate:</b> <input type="checkbox"/>
4.00	<b>f#:</b>
0.13	<b>Numerical Aperture NA:</b>
NIR I (600-1050nm)	<b>Coating:</b>
600 - 1050	<b>Wavelength Range (nm):</b>
-102.88	<b>Back Focal Length BFL (mm):</b>
$R_{avg} \leq 0.5\% @ 600 - 1050nm$	<b>Coating Specification:</b>
587.6	<b>Focal Length Specification Wavelength (nm):</b>
±1	<b>Focal Length Tolerance (%):</b>
-51.68	<b>Radius R<sub>1</sub> (mm):</b>
40-20	<b>Surface Quality:</b>
$7 J/cm^2 @ 1064nm, 10ns$	<b>Damage Threshold, By Design:</b> <input type="checkbox"/>
1.5λ	<b>Power (P-V) @ 632.8nm:</b>
λ/4	<b>Irregularity (P-V) @ 632.8nm:</b>

## Regulatory Compliance

<a href="#">Compliant</a>	<b>RoHS 2015:</b>
<a href="#">View</a>	<b>Certificate of Conformance:</b>
<a href="#">Compliant</a>	<b>Reach 235:</b>
China	<b>Country of Origin:</b>
Edmund Optics India Private Limited	<b>Imported By:</b>

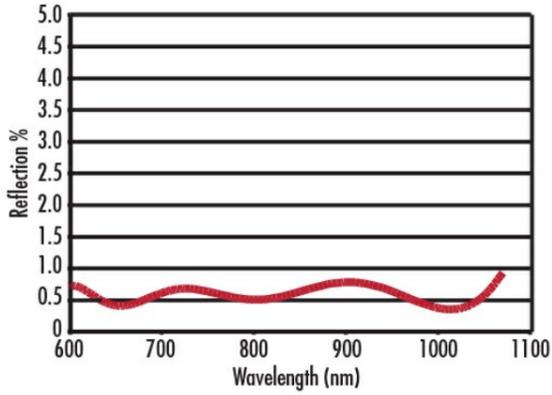
## Product Details

- AR Coated to Provide <0.5% Reflectance per Surface for 600 - 1050nm
  - Designed for 0° Angle of Incidence
  - Various Coating Options: [Uncoated](#), [VIS-EXT](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), and [NIR II](#)
- TECHSPEC® NIR I Coated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the output side of the lens causing this lens to have a negative focal length. These lenses can be used for balancing aberrations created by other lenses within a system due to their negative spherical aberration. Plano-Concave (PCV) lenses are commonly used in a variety of applications including image reduction, beam expansion and telescopes. TECHSPEC® NIR I Coated Plano-Concave (PCV) Lenses offer optimal performance in the 600nm to 1050nm range. These lenses are also available [Uncoated](#), [VIS-EXT](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), or with [NIR II](#) AR coating options.

## Technical Information

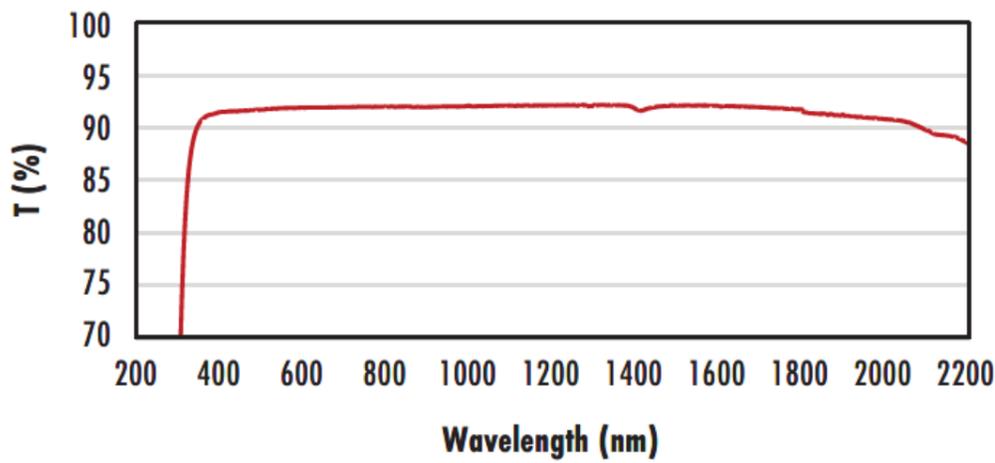


**NIR I Coating**  
 $R_{avg} \leq 0.5\% @ 600 - 1050\text{nm}$   
 Typ. Energy Density Limit:  $7 \text{ J/cm}^2 @ 1064\text{nm}, 10\text{ns}$



N-BK7

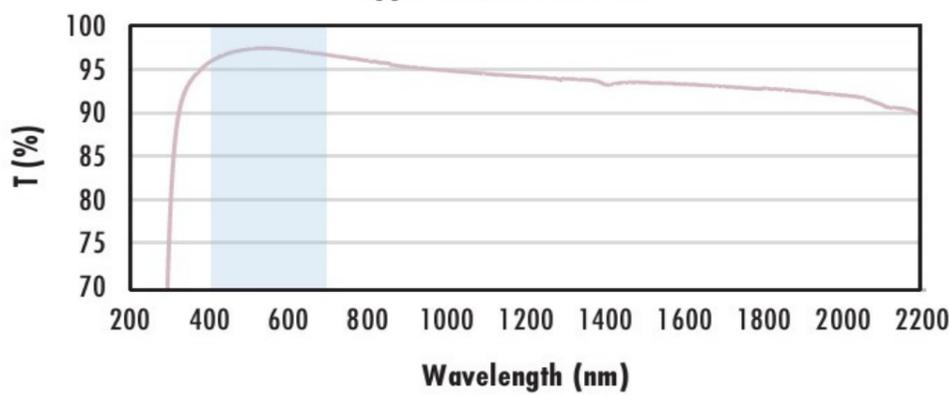
### Uncoated N-BK7 Typical Transmission



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

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### 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.

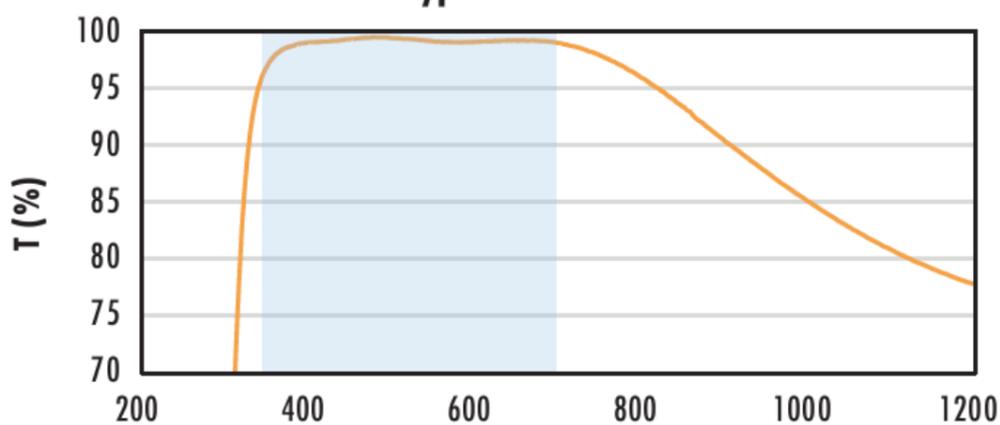
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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### 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:

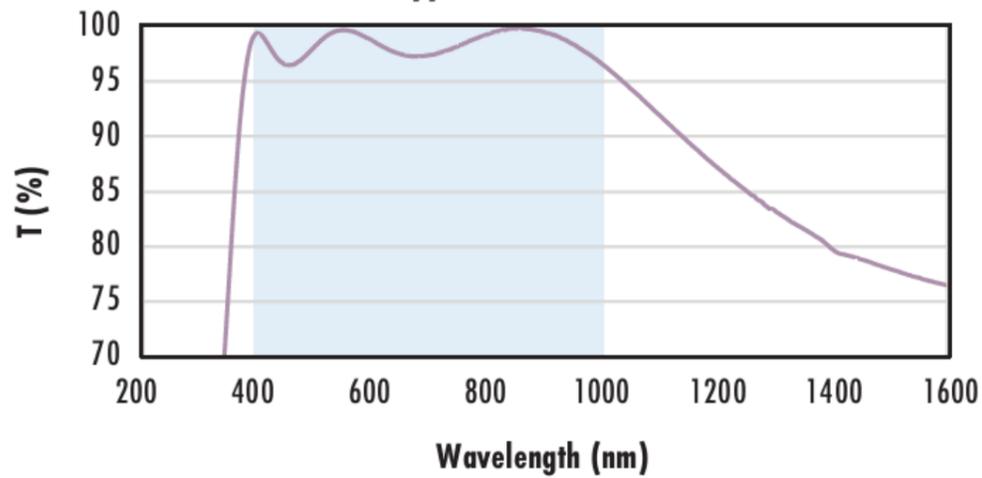
$R_{avg} \leq 0.5\% @ 350 - 700\text{nm}$

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

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Wavelength (nm)

### 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.

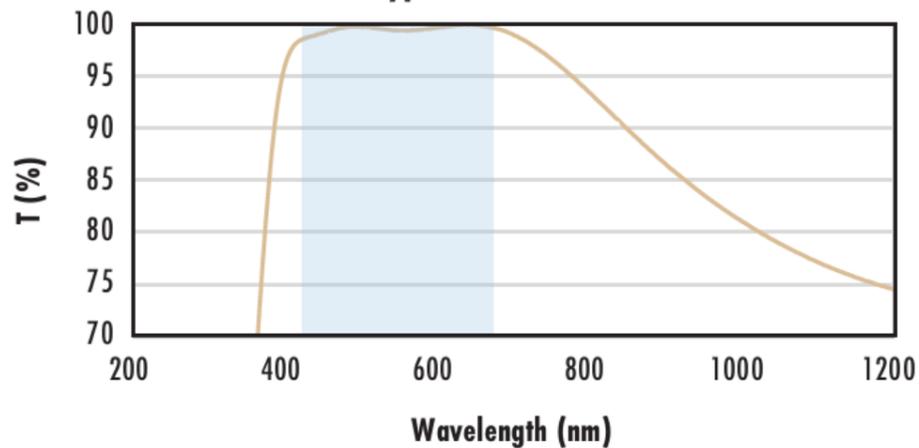
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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### 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.

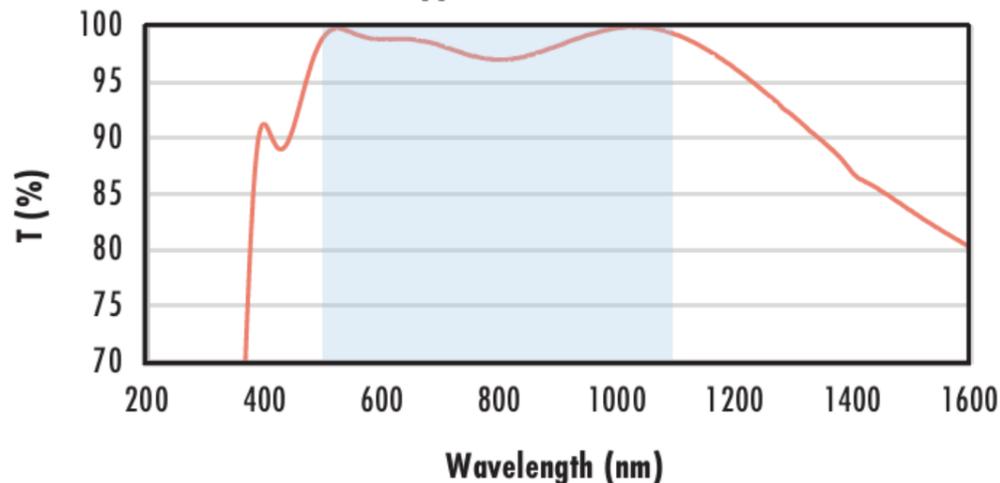
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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### 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.

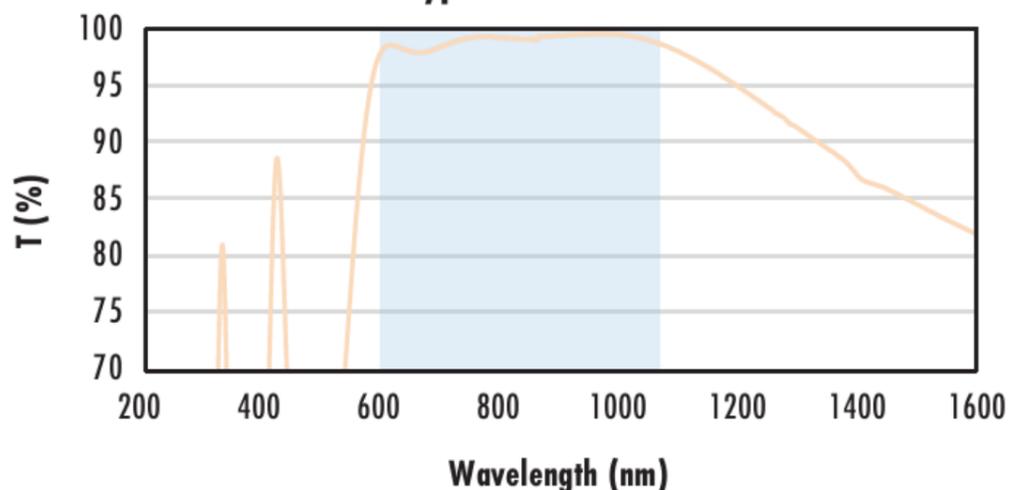
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$\begin{aligned} R_{\text{abs}} &\leq 0.25\% @ 532\text{nm} \\ R_{\text{abs}} &\leq 0.25\% @ 1064\text{nm} \\ R_{\text{avg}} &\leq 1.0\% @ 500 - 1100\text{nm} \end{aligned}$$

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

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### 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:

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

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

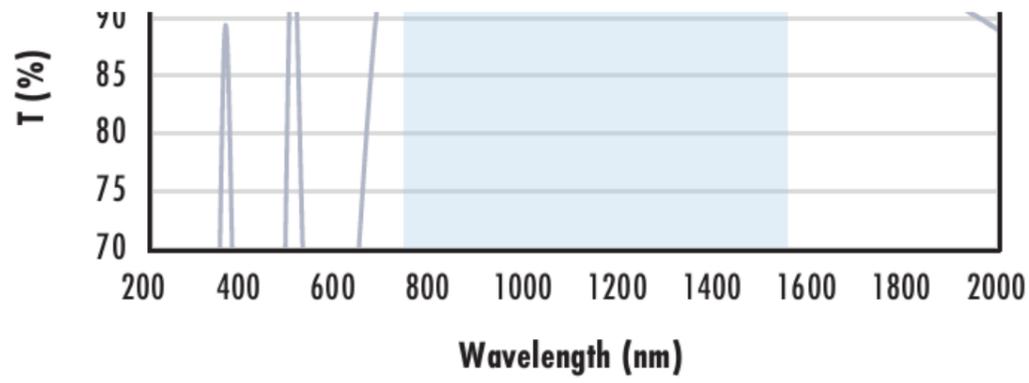
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### N-BK7 with NIR II Coating Typical Transmission



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:



$R_{\text{abs}} \leq 1.5\%$  @ 750 - 800nm  
 $R_{\text{abs}} \leq 1.0\%$  @ 800 - 1550nm  
 $R_{\text{avg}} \leq 0.7\%$  @ 750 - 1550nm

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

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## 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](#).