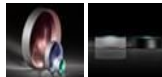


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**TECHSPEC® 9mm Diameter x -9 FL, VIS-NIR Coated, Plano-Concave Lens**



TECHSPEC VIS-NIR Coated Plano-Concave (PCV) Lenses



Stock #45-913 **20+ In Stock**

[Other Coating Options](#)

1 MRP ₹4,919

Price inclusive of all taxes

**ADD TO CART**

Volume Pricing	
Qty 1-9	₹4,919 each
Qty 10-25	₹4,414 each
Qty 26-49	₹3,935 each
Need More?	<a href="#">Request Quote</a>

Product Downloads

**General**

Plano-Concave Lens **Type:**

**Physical & Mechanical Properties**

9.00 +0.0/-0.025	<b>Diameter (mm):</b>
Protective as needed	<b>Bevel:</b>
2.25	<b>Center Thickness CT (mm):</b>
±0.05	<b>Center Thickness Tolerance (mm):</b>
<3	<b>Centering (arcmin):</b>
8.1	<b>Clear Aperture CA (mm):</b>
3.63	<b>Edge Thickness ET (mm):</b>
<b>Optical Properties</b>	
-9.00	<b>Effective Focal Length EFL (mm):</b>
<b>N-SF11</b>	<b>Substrate:</b> <input type="checkbox"/>
1.00	<b>f#:</b>
0.50	<b>Numerical Aperture NA:</b>
VIS-NIR (400-1000nm)	<b>Coating:</b>
400 - 1000	<b>Wavelength Range (nm):</b>
-10.21	<b>Back Focal Length BFL (mm):</b>
R <sub>abs</sub> ≤0.25% @ 880nm R <sub>avg</sub> ≤1.25% @ 400 - 870nm R <sub>avg</sub> ≤1.25% @ 890 - 1000nm	<b>Coating Specification:</b>
587.6	<b>Focal Length Specification Wavelength (nm):</b>
±1	<b>Focal Length Tolerance (%):</b>
-7.07	<b>Radius R<sub>1</sub> (mm):</b>
40-20	<b>Surface Quality:</b>
5 J/cm <sup>2</sup> @ 532nm, 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>

<b>Regulatory Compliance</b>	
<b>Compliant</b>	<b>RoHS 2015:</b>
<b>Compliant</b>	<b>Reach 219:</b>
<b>View</b>	<b>Certificate of Conformance:</b>
Japan	<b>Country of Origin:</b>
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	<b>Imported By:</b>

## 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

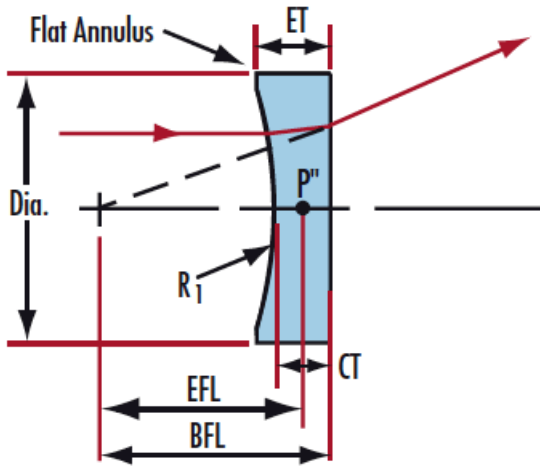
- Scalable production—from prototype to volume  
Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

## Product Details

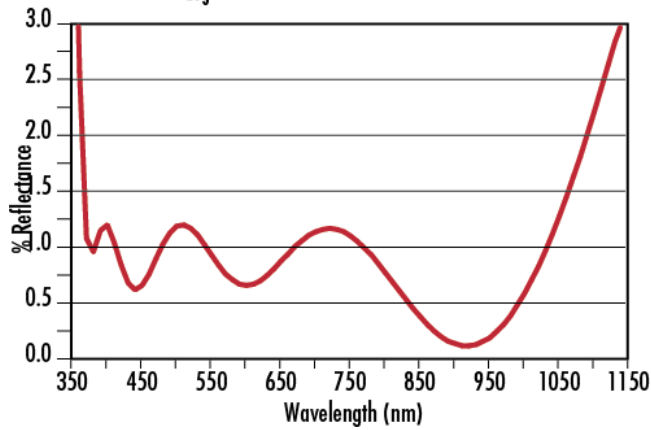
- AR Coated to Provide <1.25% Reflectance per Surface for 400 - 1000nm
- <0.25% Reflectance @ 880nm
- Designed for 0° Angle of Incidence
- Various Coating Options: [Uncoated](#), [VIS-EXT](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [YAG-BBAR](#), [NIR I](#), and [NIR II](#)

TECHSPEC® VIS-NIR 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® VIS-NIR Coated Plano-Concave (PCV) Lenses are optimized for transmission (>99%) in the near-infrared. These lenses are also available [Uncoated](#), [VIS-EXT](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [YAG-BBAR](#), [NIR I](#), or with [NIR II](#) AR coating options.

## Technical Information

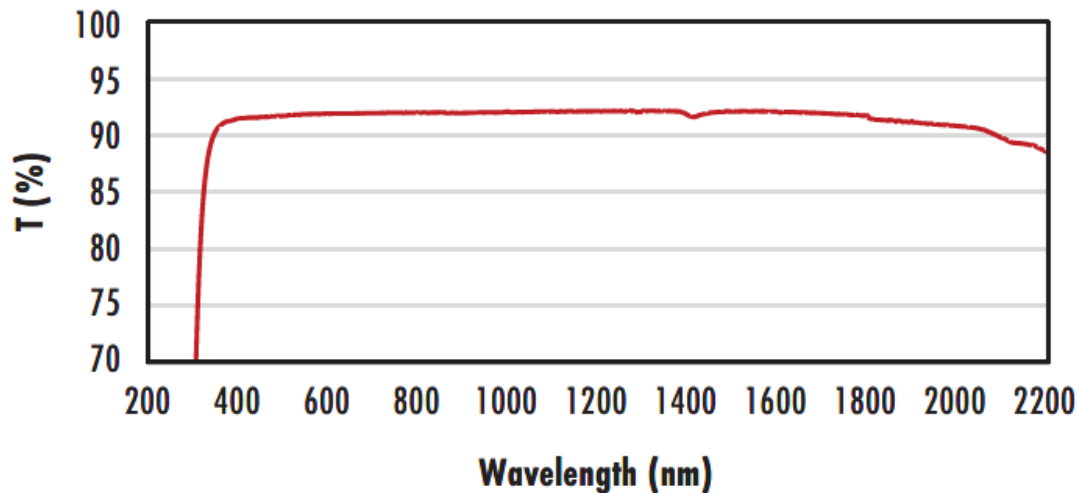


**VIS-NIR Coating**  
 $R_{\text{obs}} \leq 0.25\% @ 880\text{nm}$   
 $R_{\text{avg}} \leq 1.25\% @ 400-1000\text{nm}$



N-BK7

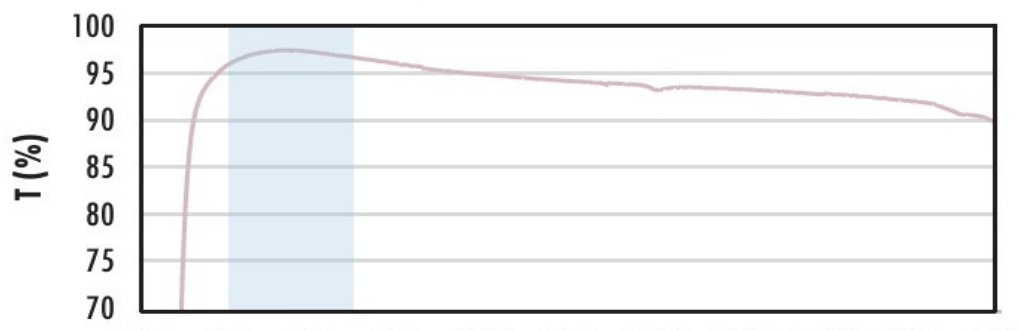
### Uncoated N-BK7 Typical Transmission



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 MgF<sub>2</sub> (400-700nm) coating at 0° AOI.

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

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

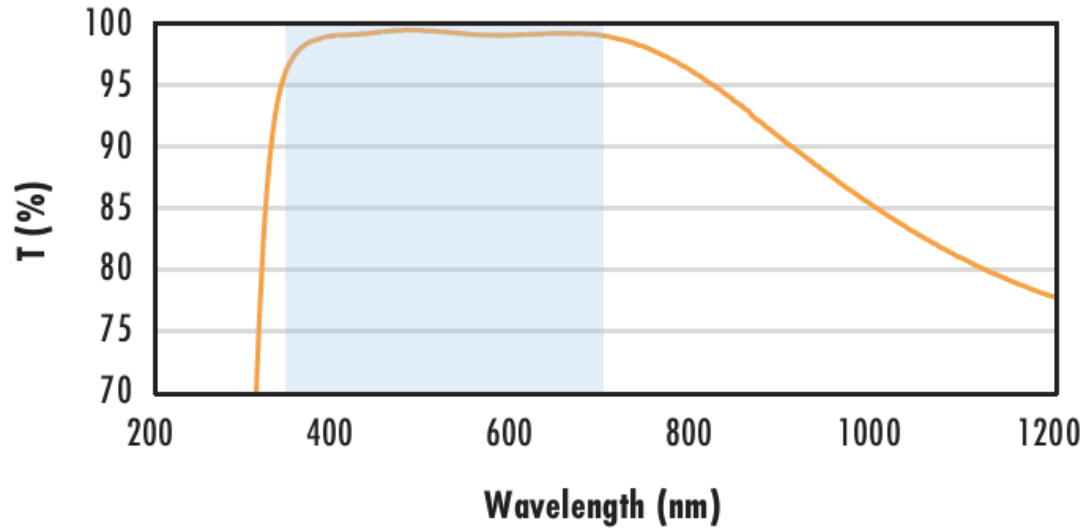
Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)

200 400 600 800 1000 1200 1400 1600 1800 2000 2200

Wavelength (nm)

### 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.

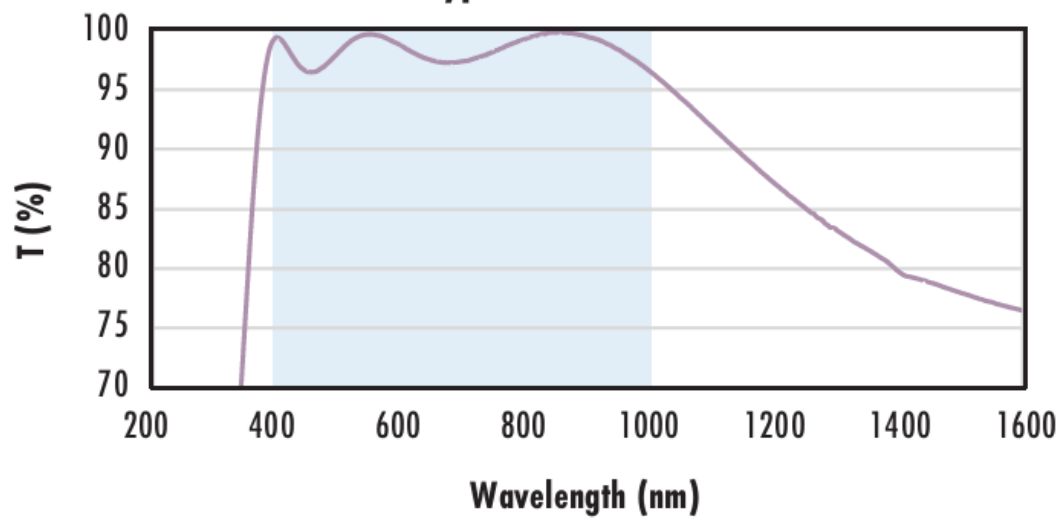
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[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:

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

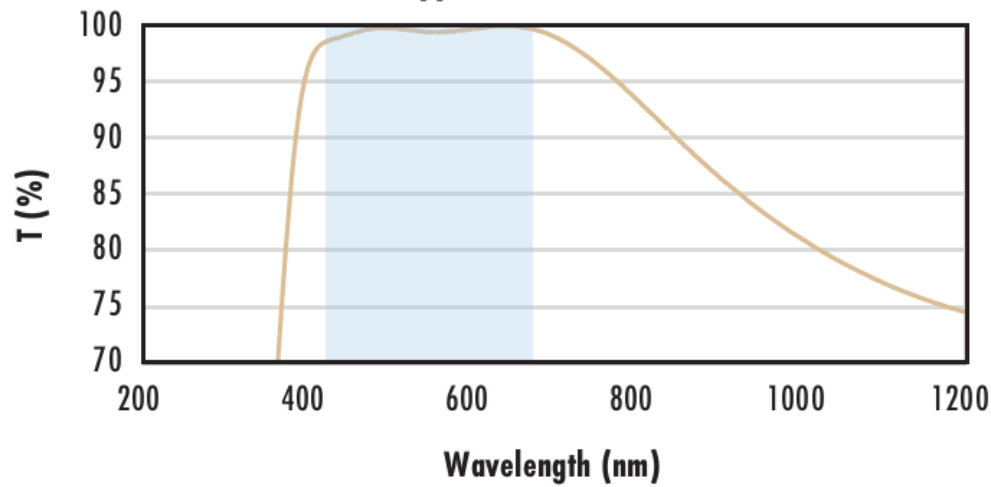
$$R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$$

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

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.

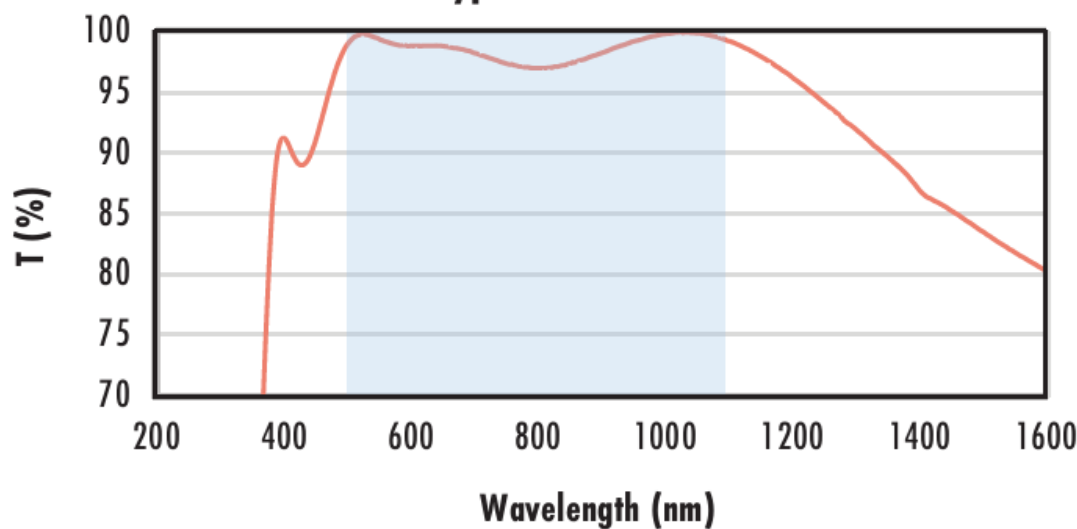
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

### 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:

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

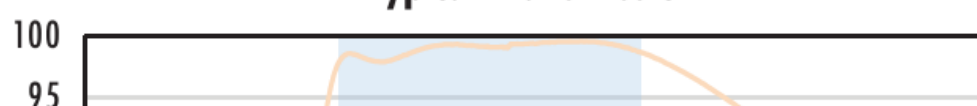
$$R_{abs} \leq 0.25\% @ 1064\text{nm}$$

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

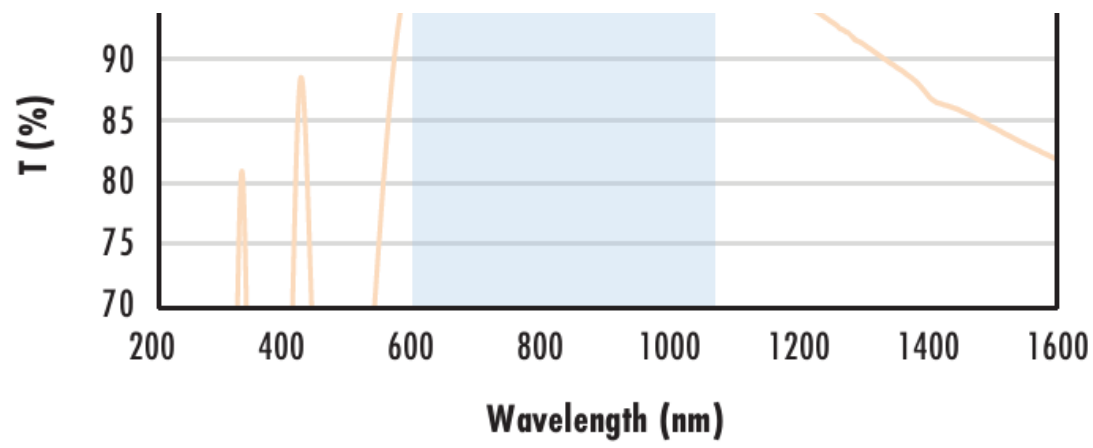
Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)

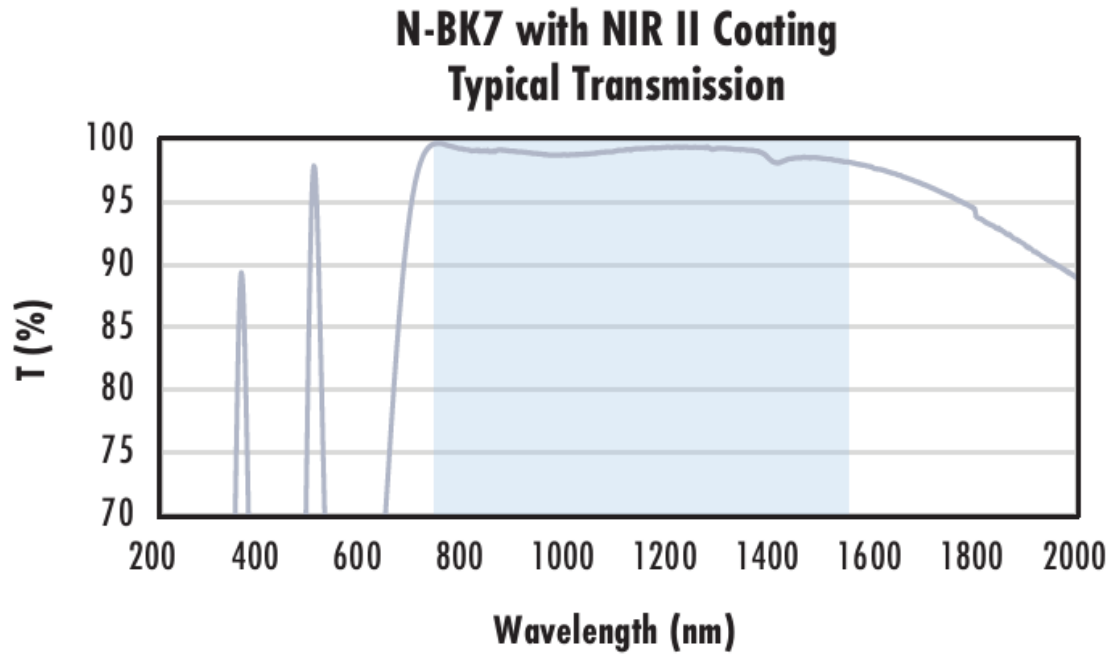
### N-BK7 with NIR I Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with



NIR I (600 - 1050nm) coating at 0° AOI.  
 The blue shaded region indicates the coating design wavelength range, with the following specification:  
 $R_{avg} \leq 0.5\% @ 600 - 1050nm$   
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)



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:  
 $R_{abs} \leq 1.5\% @ 750 - 800nm$   
 $R_{abs} \leq 1.0\% @ 800 - 1550nm$   
 $R_{avg} \leq 0.7\% @ 750 - 1550nm$   
 Data outside this range is not guaranteed and is for reference only.  
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### Coating Curves

### Compatible Mounts