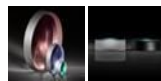


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**TECHSPEC® 9mm Diameter x -12 FL, VIS-NIR Coated, Plano-Concave Lens**



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



Stock #48-346 **11 In Stock**

[Other Coating Options](#)

⊖ 1 ⊕ £39.<sup>00</sup>

**ADD TO CART**

Volume Pricing	
Qty 1-9	£39.00 each
Qty 10-25	£35.00 each
Qty 26-49	£31.20 each
Need More?	<a href="#">Request Quote</a>

ⓘ Prices shown are exclusive of VAT/local taxes

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>
<1	<b>Centering (arcmin):</b>
8.1	<b>Clear Aperture CA (mm):</b>
3.24	<b>Edge Thickness ET (mm):</b>
<b>Optical Properties</b>	
-12.00	<b>Effective Focal Length EFL (mm):</b>
<b>N-SF11</b>	<b>Substrate:</b> <input type="checkbox"/>
1.33	<b>f#:</b>
0.38	<b>Numerical Aperture NA:</b>
VIS-NIR (400-1000nm)	<b>Coating:</b>
400 - 1000	<b>Wavelength Range (nm):</b>
-13.26	<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>
-9.42	<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>View</b>	<b>Certificate of Conformance:</b>
<b>Compliant</b>	<b>Reach 235:</b>

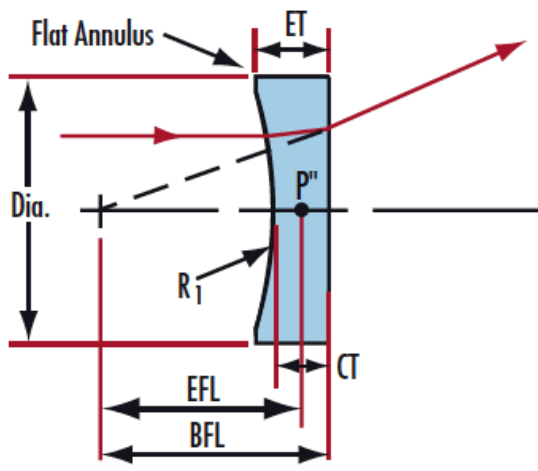
## Product Details

- AR Coated to Provide <1.25% Reflectance per Surface for 400 - 1000nm
- <0.25% Reflectance @ 880nm
- Designed for 0° Angle of Incidence

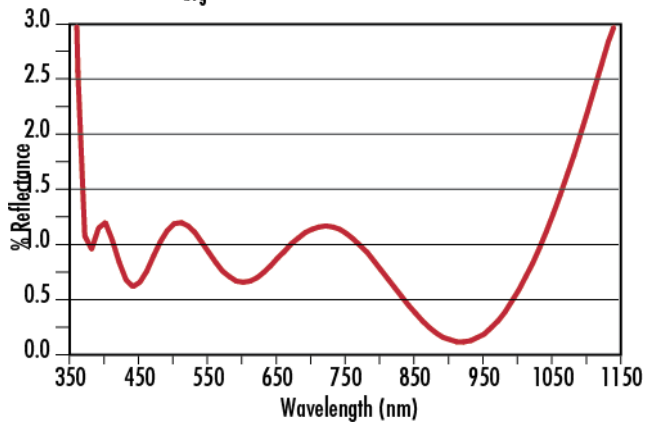
• Various Coating Options: [Uncoated](#), [VIS-EXT](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [YAG-BBAR](#), [NIR I](#), and [NIR II](#)

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

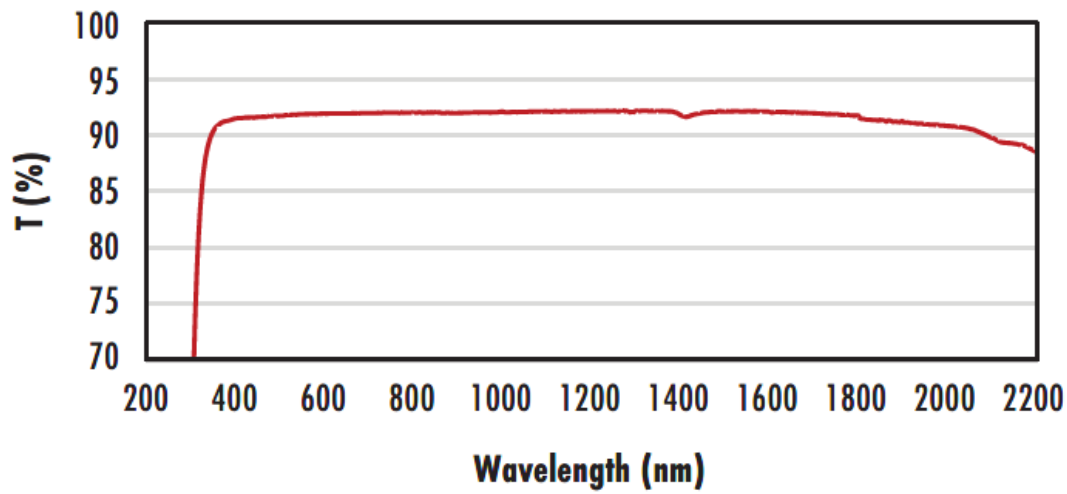


**VIS-NIR Coating**  
 $R_{obs} \leq 0.25\% @ 880\text{nm}$   
 $R_{avg} \leq 1.25\% @ 400-1000\text{nm}$



N-BK7

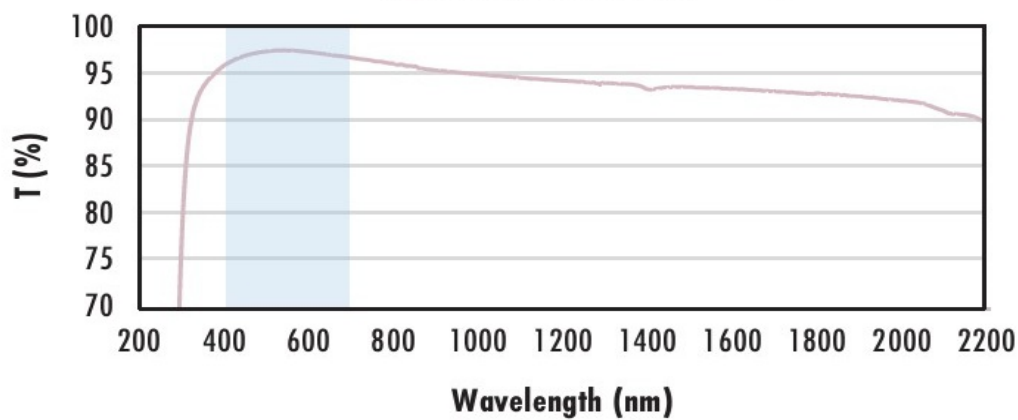
### Uncoated N-BK7 Typical Transmission



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.

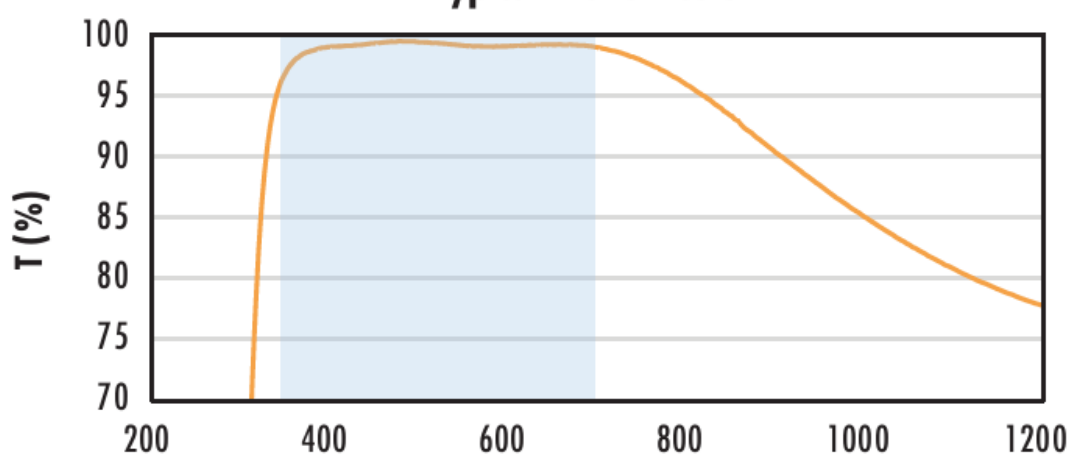
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

### 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:

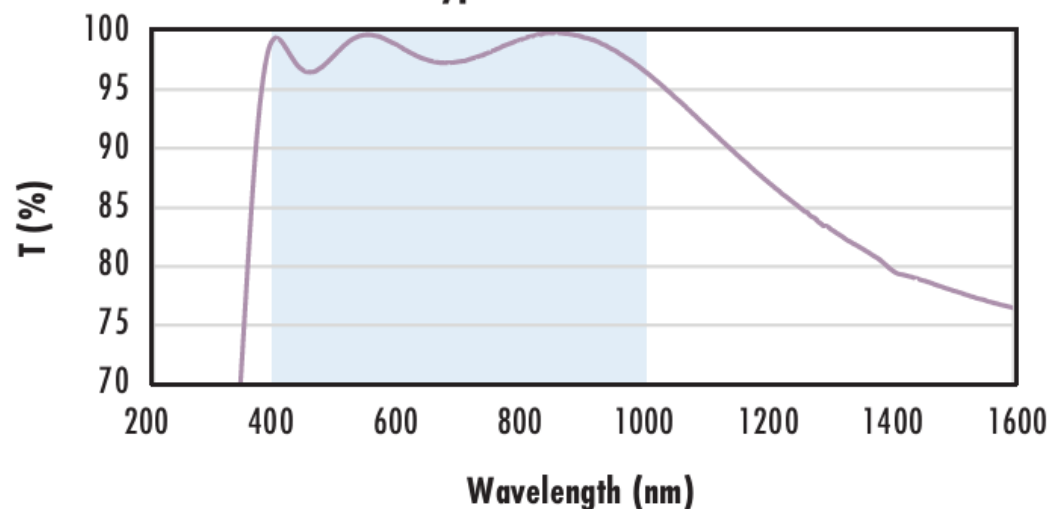
$R_{avg} \leq 0.5\% @ 350 - 700\text{nm}$

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

[Click Here to Download Data](#)

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.

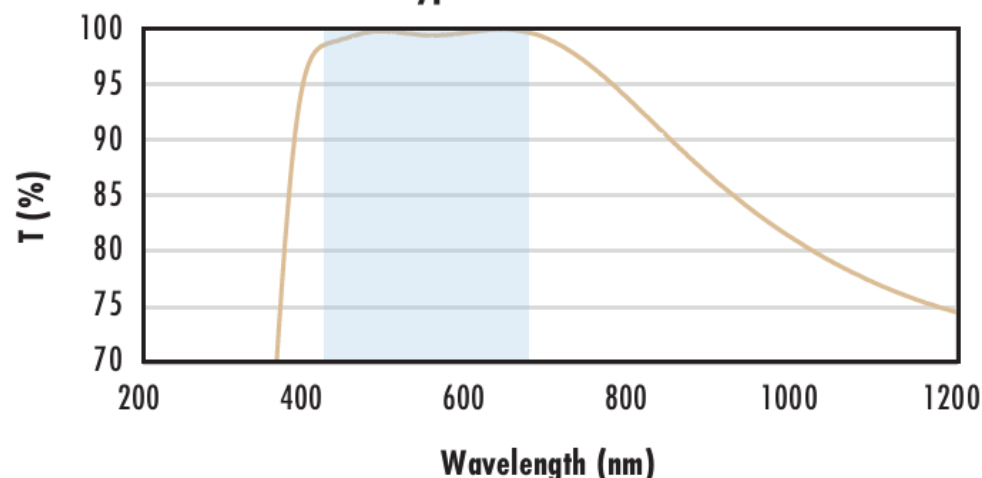
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[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.

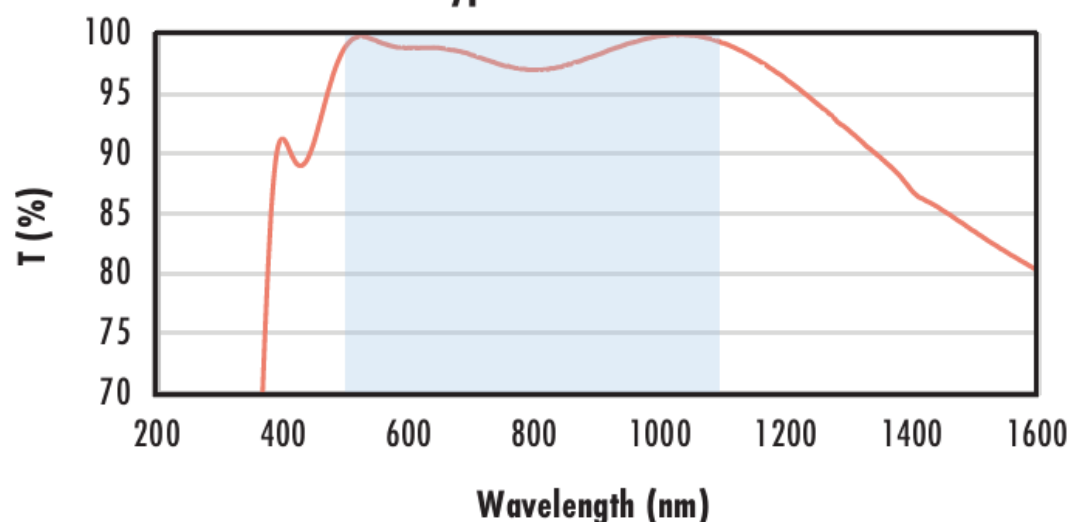
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

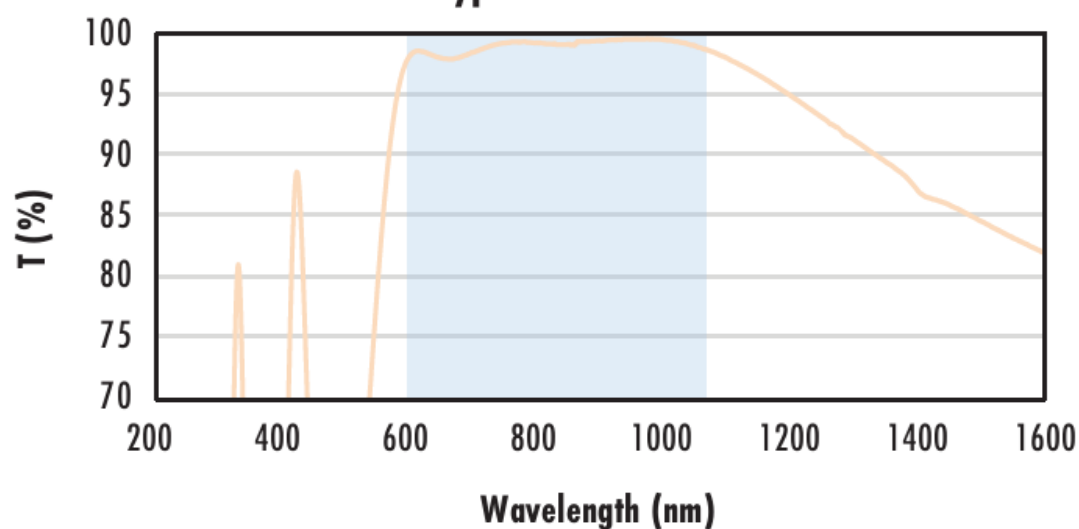
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[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:

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

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

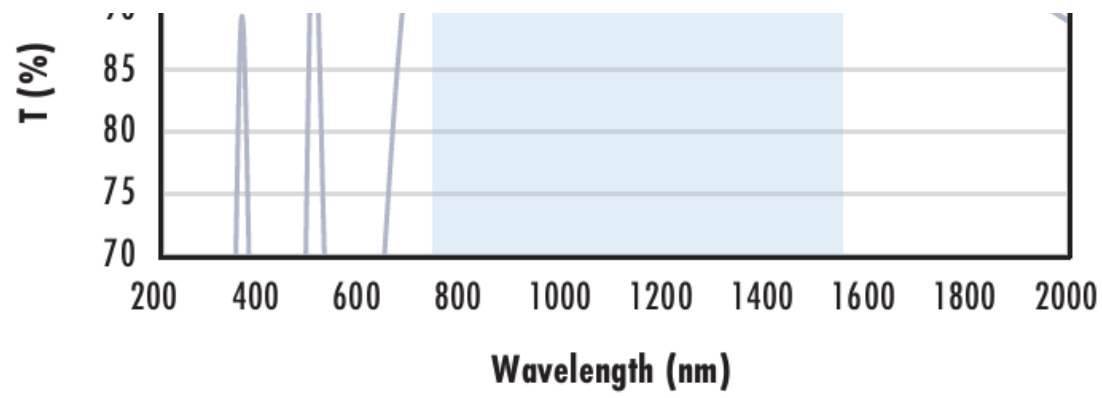
[Click Here to Download Data](#)

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



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

[Click Here to Download Data](#)

## Coating Curves

### 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](#).

## Compatible Mounts