

TECHSPEC<sup>®</sup> 12.0mm Dia. x -12 FL, Uncoated, Plano-Concave Lens



TECHSPEC Uncoated Plano-Concave (PCV) Lenses



Stock **#45-014** **20+ In Stock**

[Other Coating Options](#)

-

1

+

A\$53<sup>60</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | A\$53.60 each                 |
| Qty 10-25      | A\$48.40 each                 |
| Qty 26-49      | A\$42.80 each                 |
| Need More?     | <a href="#">Request Quote</a> |

Product Downloads

SPECIFICATIONS

General

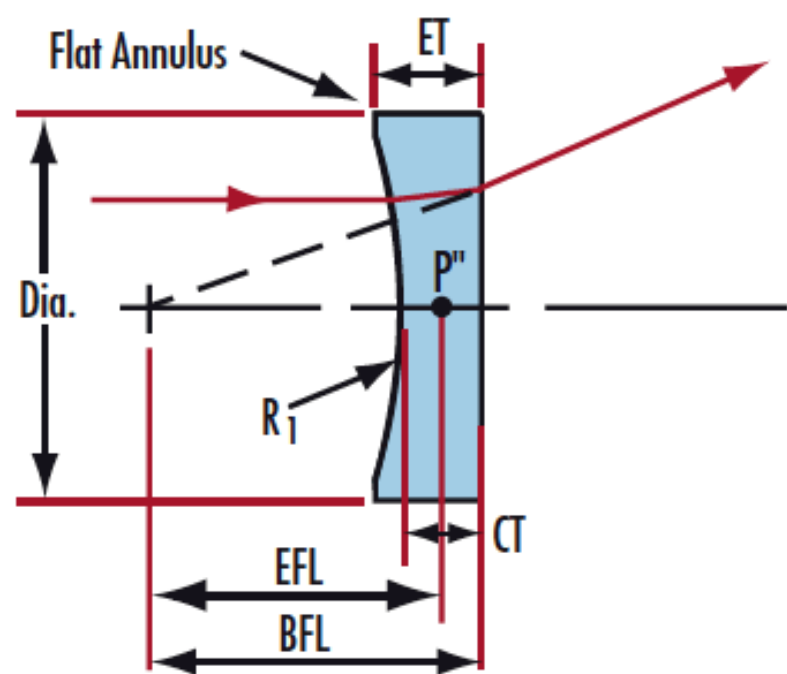
|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Plano-Concave Lens               | Type:                                       |
| Physical & Mechanical Properties |                                             |
| 12.00 +0.0/-0.025                | Diameter (mm):                              |
| Protective as needed             | Bevel:                                      |
| 2.20                             | Center Thickness CT (mm):                   |
| ±0.05                            | Center Thickness Tolerance (mm):            |
| <1                               | Centering (arcmin):                         |
| 11.00                            | Clear Aperture CA (mm):                     |
| 4.12                             | Edge Thickness ET (mm):                     |
| Optical Properties               |                                             |
| -12.00                           | Effective Focal Length EFL (mm):            |
| N-SF11                           | Substrate: <div></div>                      |
| 1.00                             | f/#:                                        |
| 0.50                             | Numerical Aperture NA:                      |
| Uncoated                         | Coating:                                    |
| 400 - 2500                       | Wavelength Range (nm):                      |
| -13.23                           | Back Focal Length BFL (mm):                 |
| 587.6                            | Focal Length Specification Wavelength (nm): |
| ±1                               | Focal Length Tolerance (%):                 |
| -9.42                            | Radius R <sub>1</sub> (mm):                 |
| 40-20                            | Surface Quality:                            |
| 1.5λ                             | Power (P-V) @ 632.8nm:                      |
| λ/4                              | Irregularity (P-V) @ 632.8nm:               |
| Regulatory Compliance            |                                             |
| Compliant                        | RoHS 2015:                                  |
| Compliant                        | Reach 219:                                  |
| View                             | Certificate of Conformance:                 |

## PRODUCT DETAILS

- Wavelength Range of 400-2200nm
- Precision Diameter and Centration Tolerances Allow for Easy OEM Integration
- Wide Variety of Diameters, Focal Lengths, and Coatings
- Anti-Reflection Coating Options: [VIS-EXT](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), [NIR I](#), and [NIR II](#)

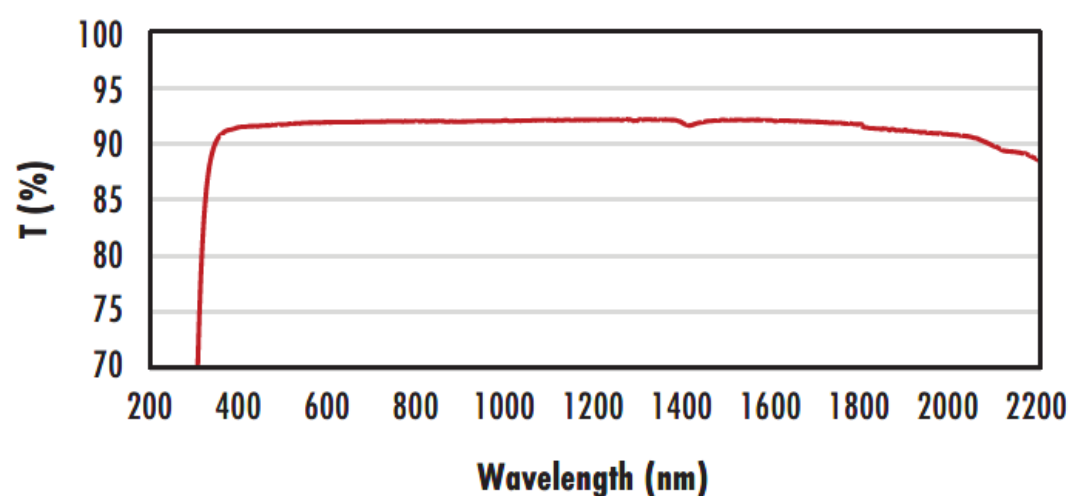
TECHSPEC® Uncoated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the output side of the lens causing this lens to have a negative focal length. These lenses can be used for balancing aberrations created by other lenses within a system due to their negative spherical aberration. Plano-Concave (PCV) lenses are commonly used in a variety of applications including image reduction, beam expansion and telescopes. TECHSPEC® Uncoated Plano-Concave (PCV) Lenses offer optimal performance in the 350nm to 2200nm range. These lenses are also available [VIS-EXT](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), [NIR I](#), or with [NIR II](#) AR coating options.

## TECHNICAL INFORMATION



N-BK7

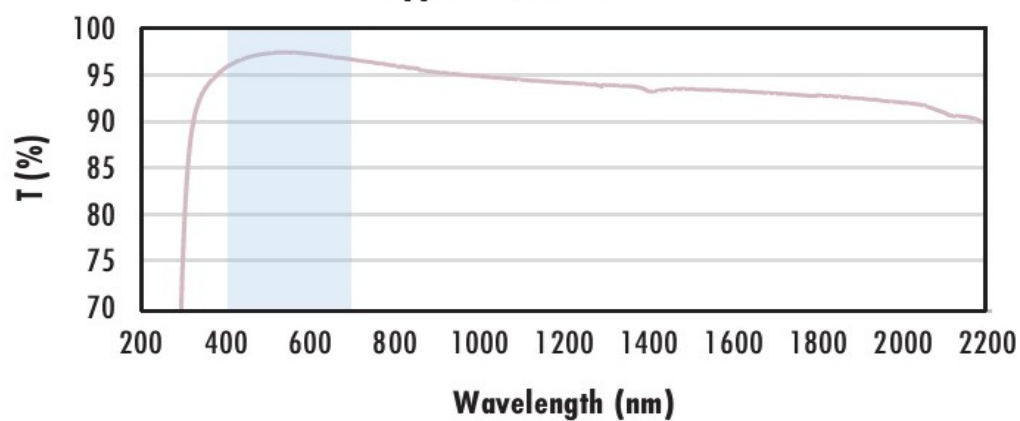
**Uncoated N-BK7 Typical Transmission**



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.

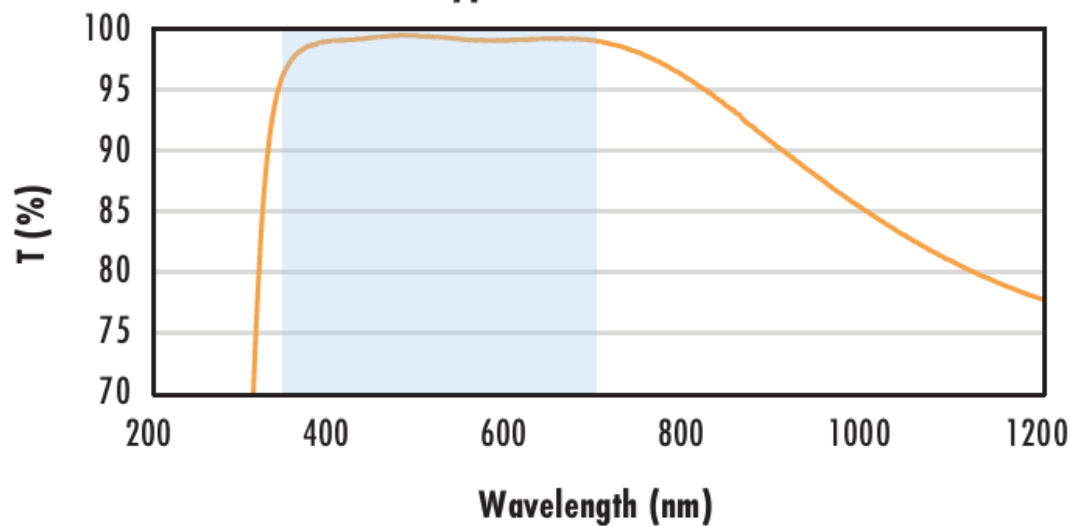
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[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.

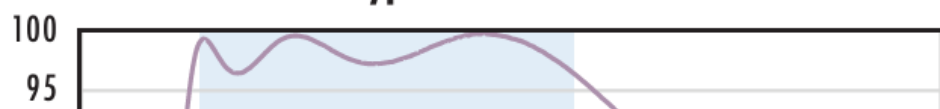
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

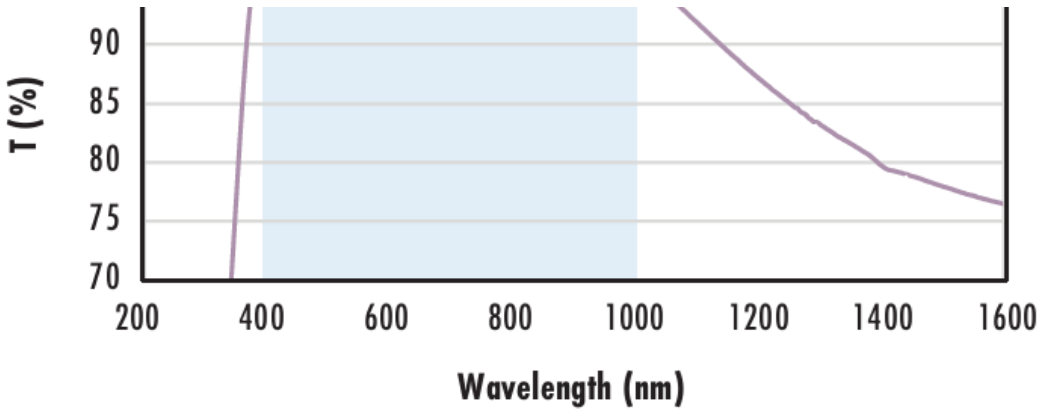
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**N-BK7 with VIS-NIR Coating Typical Transmission**



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



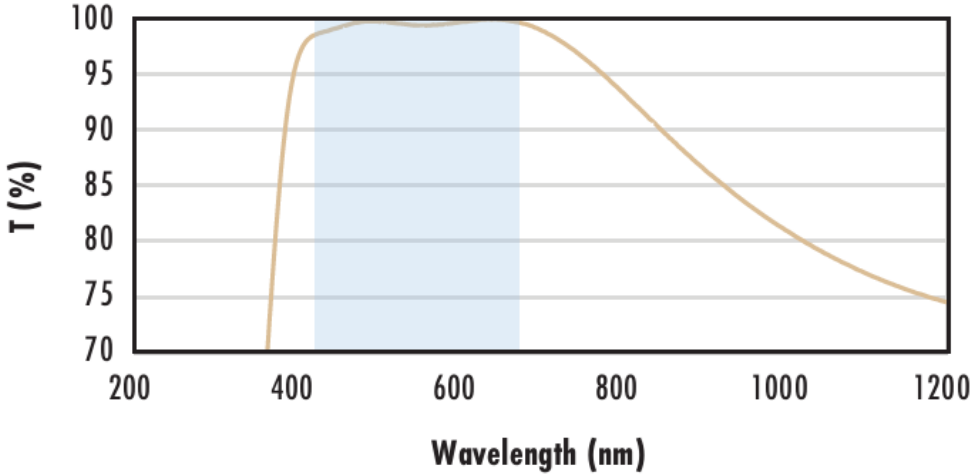
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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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.

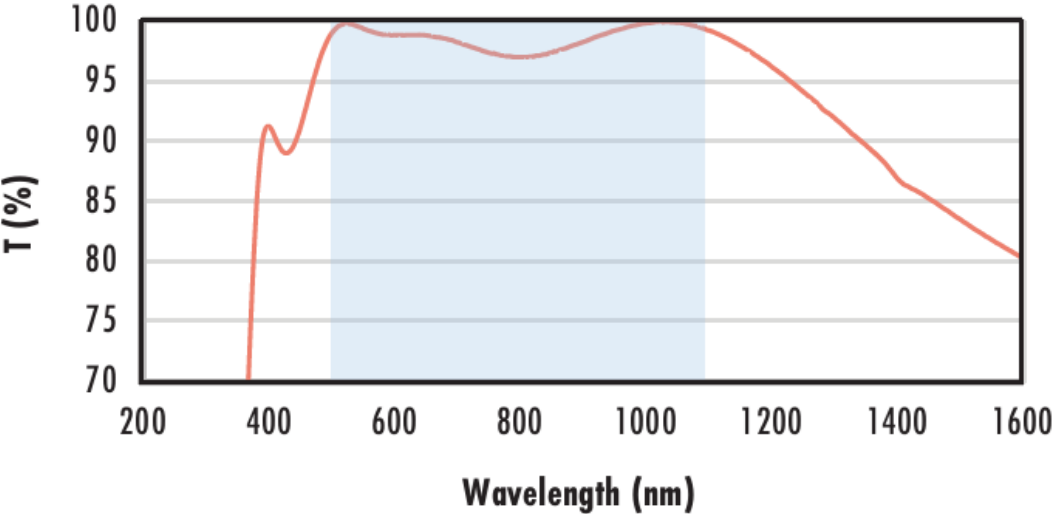
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

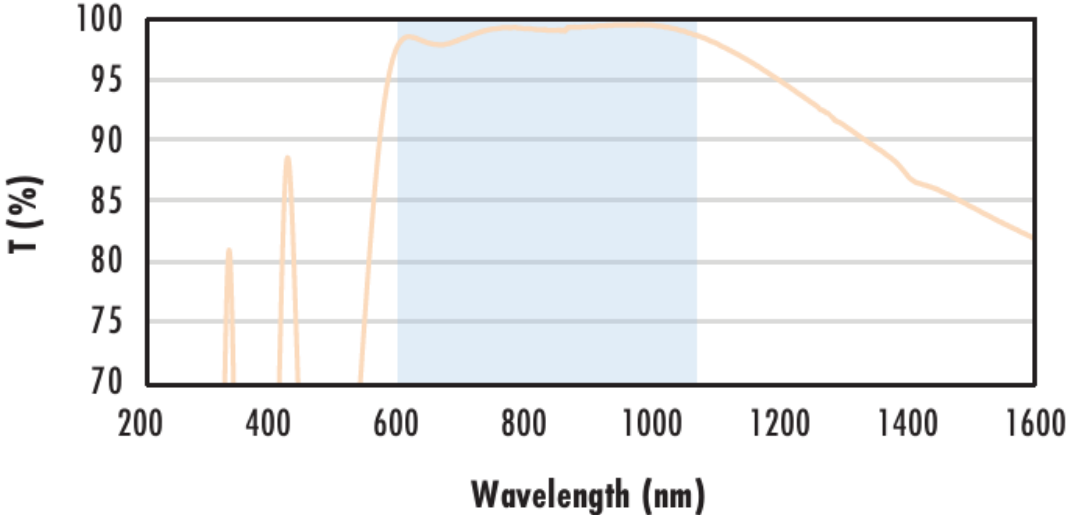
The blue shaded region indicates the coating design wavelength range, with the following specification:

$R_{abs} \leq 0.25\% @ 532nm$   
 $R_{abs} \leq 0.25\% @ 1064nm$   
 $R_{avg} \leq 1.0\% @ 500 - 1100nm$

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 NIR I (600 - 1050nm) coating at 0° AOI.

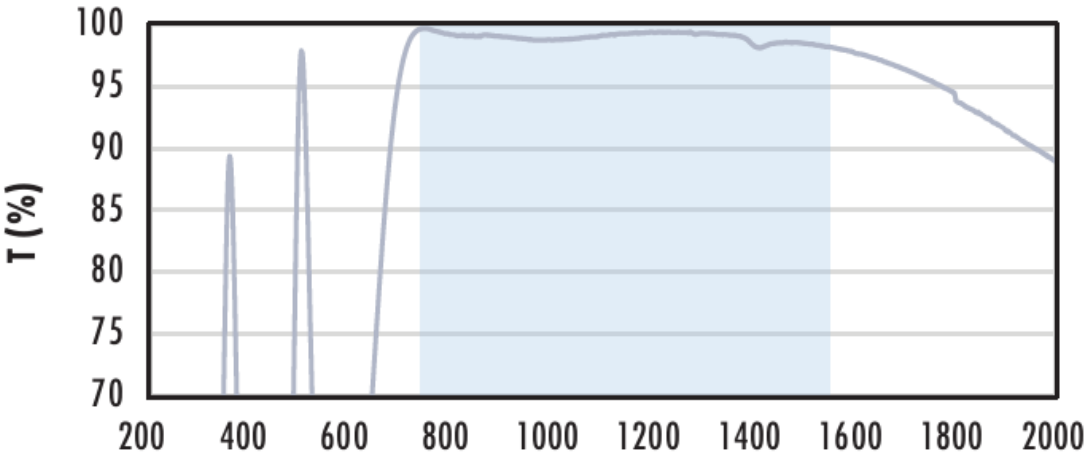
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

**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:

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

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

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Wavelength (nm)

## 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

