

TECHSPEC® 12.0mm Dia. x -24 FL, Uncoated, Plano-Concave Lens

TECHSPEC Uncoated Plano-Concave (PCV) Lenses

Stock **#45-016** **20+** In Stock [Other Coating Options](#) **A\$53⁶⁰****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
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SPECIFICATIONS**General**

Type:

Plano-Concave Lens

Physical & Mechanical Properties**Diameter (mm):**

12.00 +0.0/-0.025

Bevel:

Protective as needed

Center Thickness CT (mm):

3.50

Center Thickness Tolerance (mm):

±0.05

Centering (arcmin):

<1

Clear Aperture CA (mm):

11.00

Edge Thickness ET (mm):

4.79

Optical Properties**Effective Focal Length EFL (mm):**

-24.00

Substrate: 

N-BK7

f#:

2.00

Numerical Aperture NA:

0.25

Coating:

Uncoated

Wavelength Range (nm):

350 - 2200

Back Focal Length BFL (mm):

-26.32

Focal Length Specification Wavelength (nm):

587.6

Focal Length Tolerance (%):

±1

Radius R₁ (mm):

-12.40

Surface Quality:

40-20

Power (P-V) @ 632.8nm:

1.5λ

Irregularity (P-V) @ 632.8nm:

λ/4

Regulatory Compliance**RoHS 2015:**

Compliant

Reach 219:

Compliant

Certificate of Conformance:

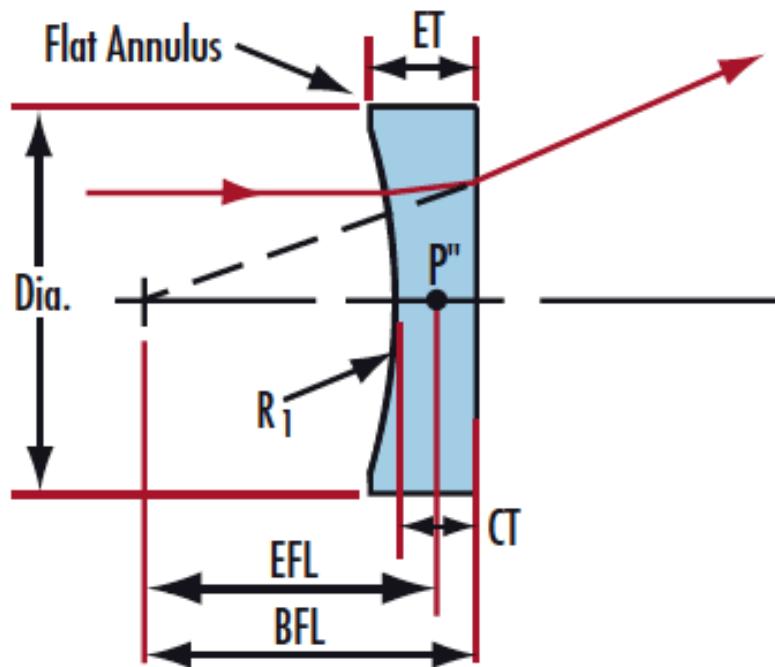
View

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](#), [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), [NIR I](#), and [NIR II](#)

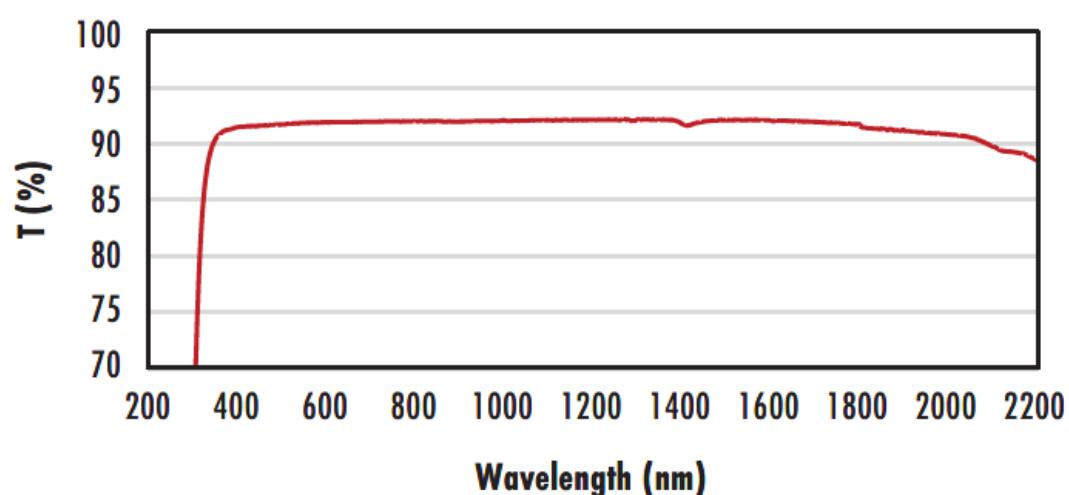
TECHSPEC® Uncoated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the output side of the lens causing this lens to have a negative focal length. These lenses can be used for balancing aberrations created by other lenses within a system due to their 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](#), [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), [NIR I](#), or with [NIR II](#) AR coating options.

TECHNICAL INFORMATION



N-BK7

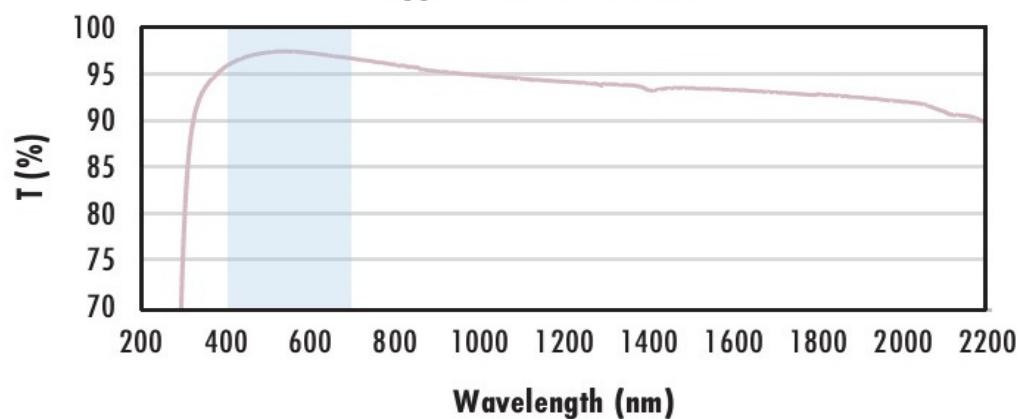
Uncoated N-BK7 Typical Transmission



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

[Click Here to Download Data](#)

N-BK7 with MgF_2 Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with MgF_2 (400-700nm) coating at 0° AOI.

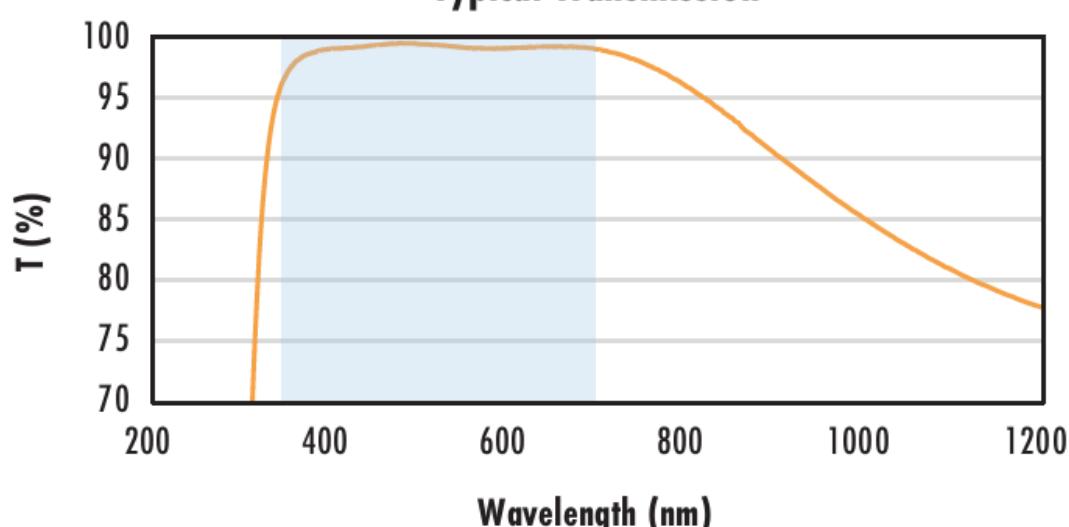
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

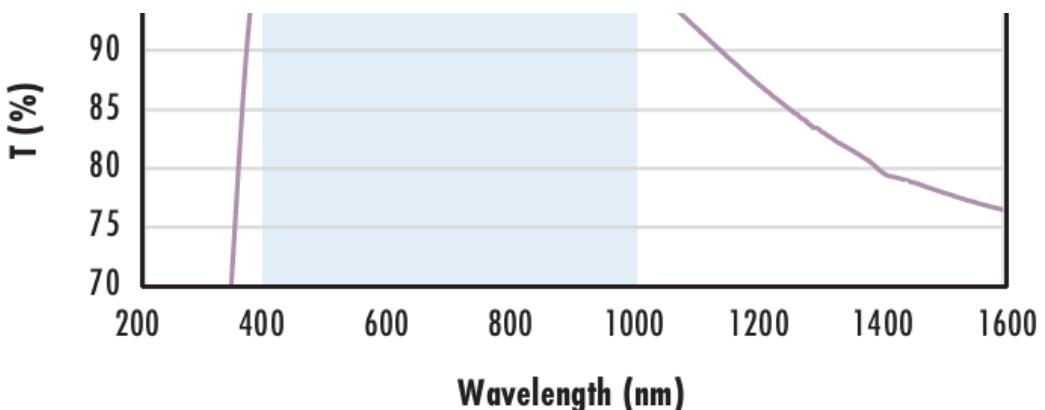
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N-BK7 with VIS-NIR Coating Typical Transmission



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

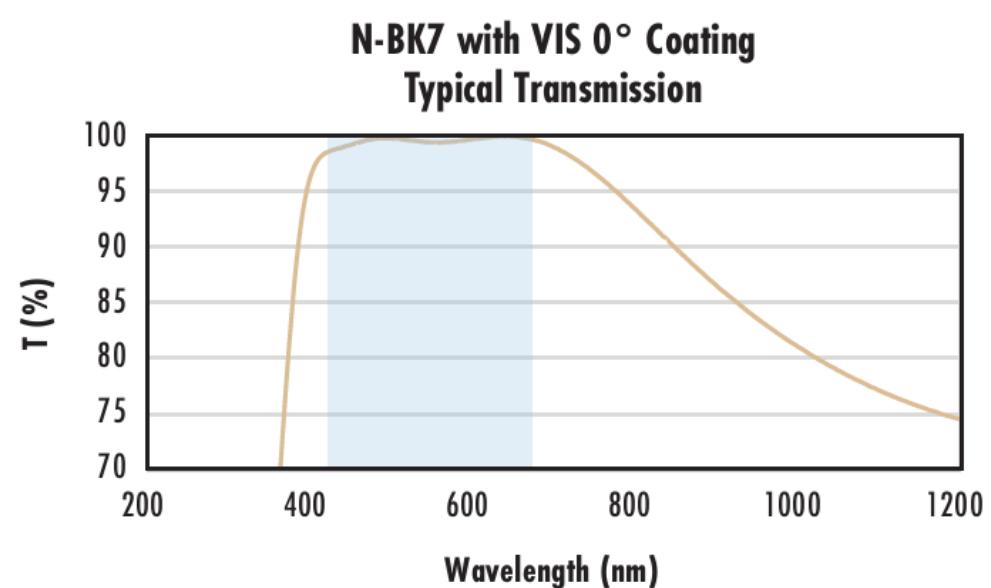


The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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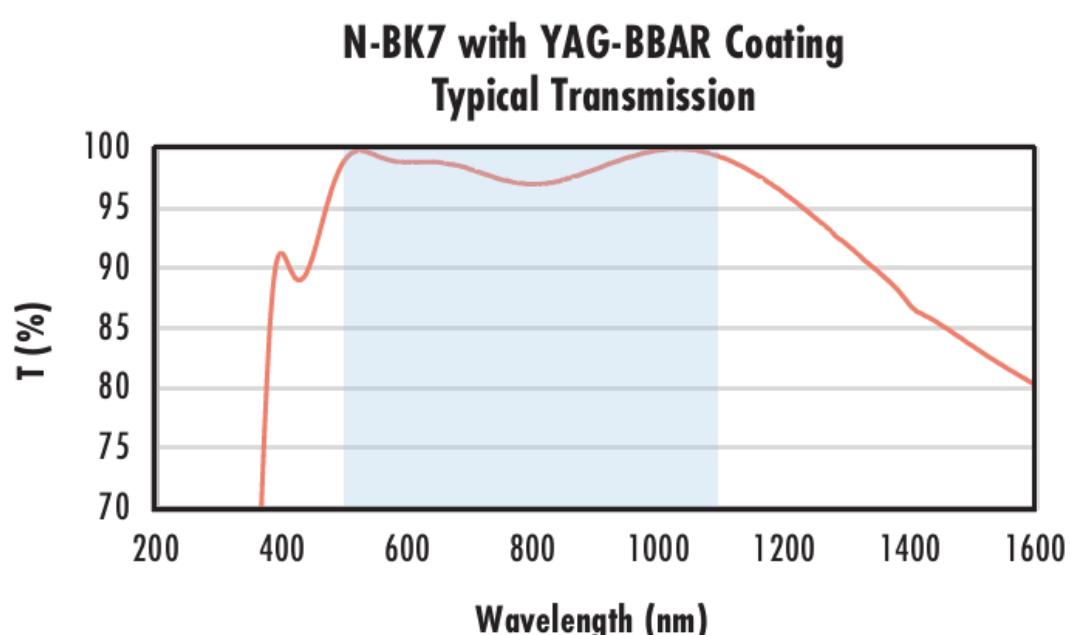
Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

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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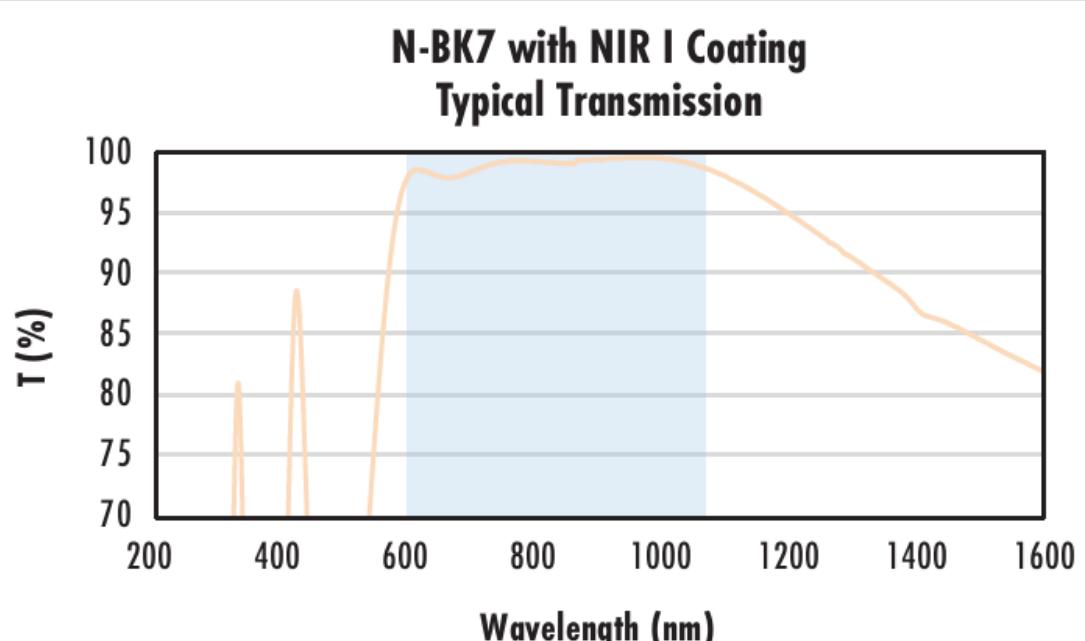
Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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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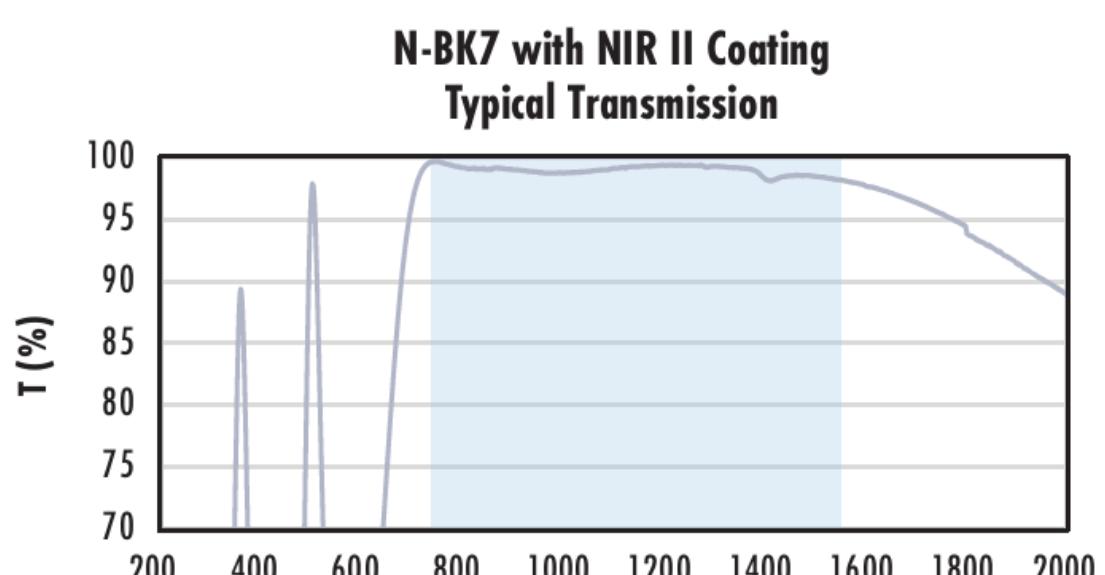
Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.

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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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:

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

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

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COMPATIBLE MOUNTS