

TECHSPEC[®] 3mm Diameter x -9 FL, NIR I Coated, Plano-Concave Lens



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-

1

+

£57⁷⁸

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Volume Pricing	
Qty 1-9	£57.78 each
Qty 10-25	£52.09 each
Qty 26-49	£46.40 each
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Prices shown are exclusive of VAT/local taxes

Product Downloads

SPECIFICATIONS

General

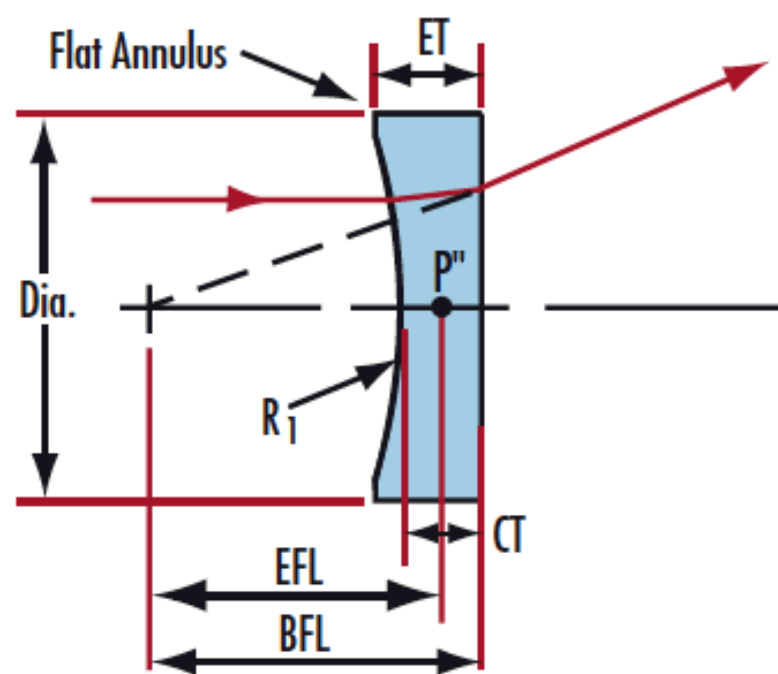
Plano-Concave Lens		Type:
Physical & Mechanical Properties		
Diameter (mm):		3.00 +0.0/-0.025
Bevel:		Protective as needed
Center Thickness CT (mm):		1.00
Center Thickness Tolerance (mm):		±0.05
Centering (arcmin):		<3
Clear Aperture CA (mm):		2.7
Edge Thickness ET (mm):		1.11
Optical Properties		
Effective Focal Length EFL (mm):		-9.00
Substrate: ☐		N-SF11
f/#:		3.00
Numerical Aperture NA:		0.17
Coating:		NIR I (600-1050nm)
Wavelength Range (nm):		600 - 1050
Back Focal Length BFL (mm):		-9.56
Coating Specification:		R _{avg} ≤0.5% @ 600 - 1050nm
Focal Length Specification Wavelength (nm):		587.6
Focal Length Tolerance (%):		±1
Radius R ₁ (mm):		-7.06
Surface Quality:		20-10
Damage Threshold, By Design: ☐		7 J/cm ² @ 1064nm, 10ns
Power (P-V) @ 632.8nm:		1.5λ
Irregularity (P-V) @ 632.8nm:		λ/4
Regulatory Compliance		
RoHS 2015:		Compliant
Certificate of Conformance:		View
Reach 235:		Compliant

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

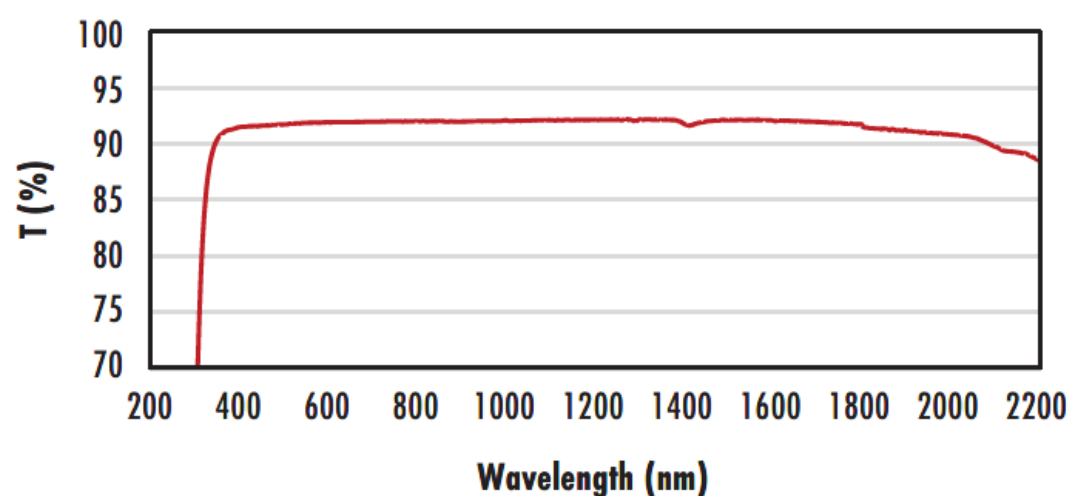
TECHSPEC® NIR I Coated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the output side of the lens causing this lens to have a negative focal length. These lenses can be used for balancing aberrations created by other lenses within a system due to their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

TECHNICAL INFORMATION



N-BK7

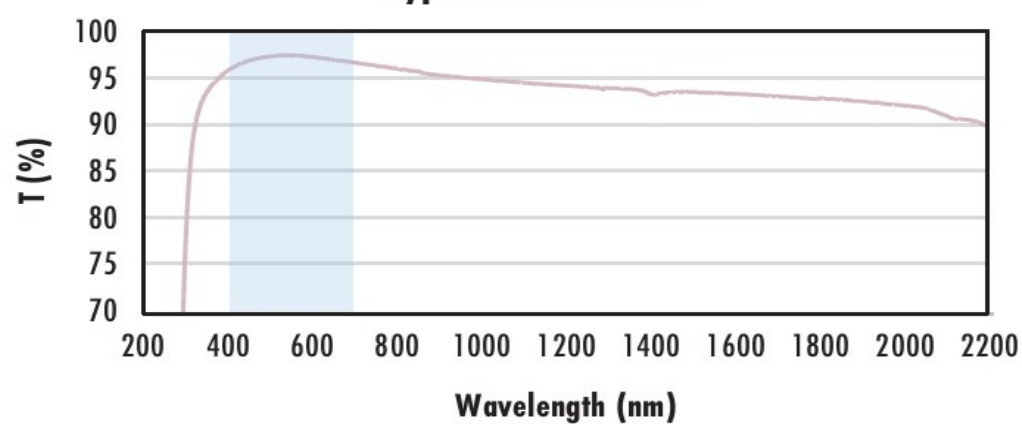
Uncoated N-BK7 Typical Transmission



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

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N-BK7 with MgF₂ Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with MgF₂ (400-700nm) coating at 0° AOI.

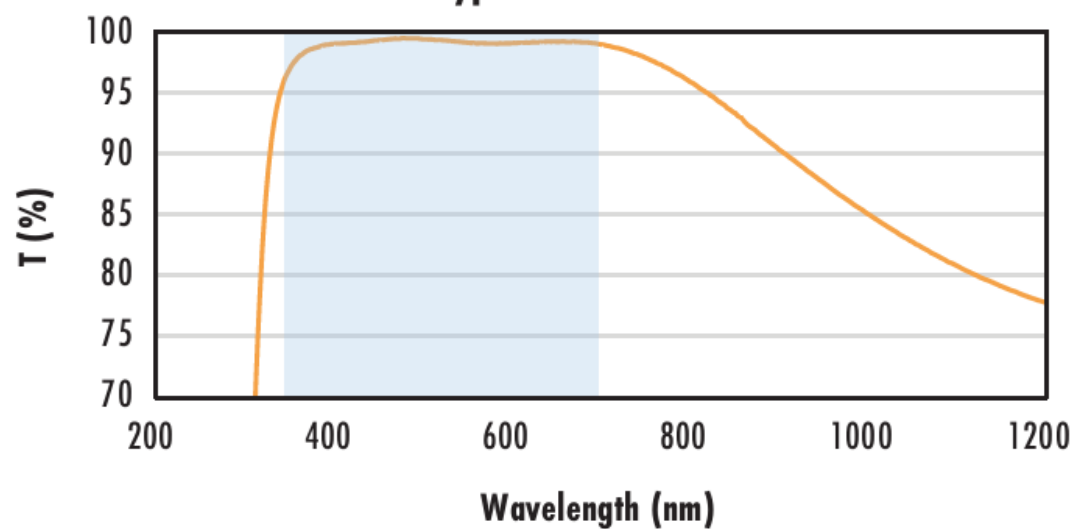
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

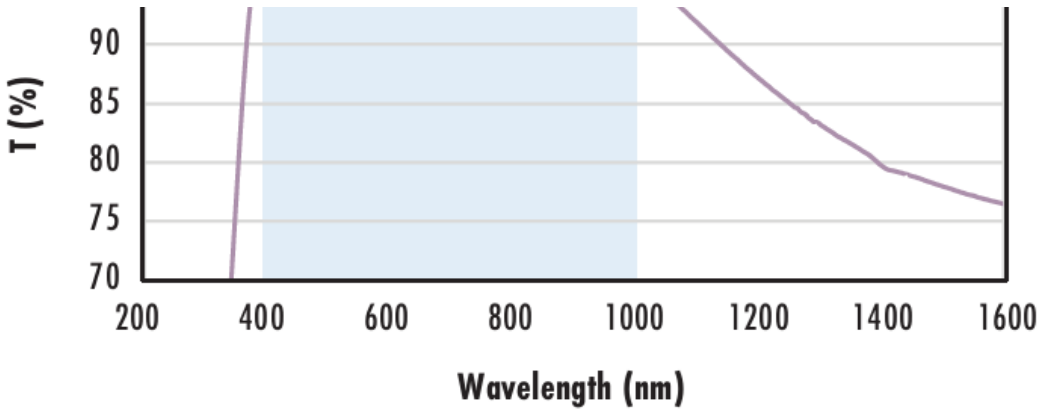
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N-BK7 with VIS-NIR Coating Typical Transmission



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



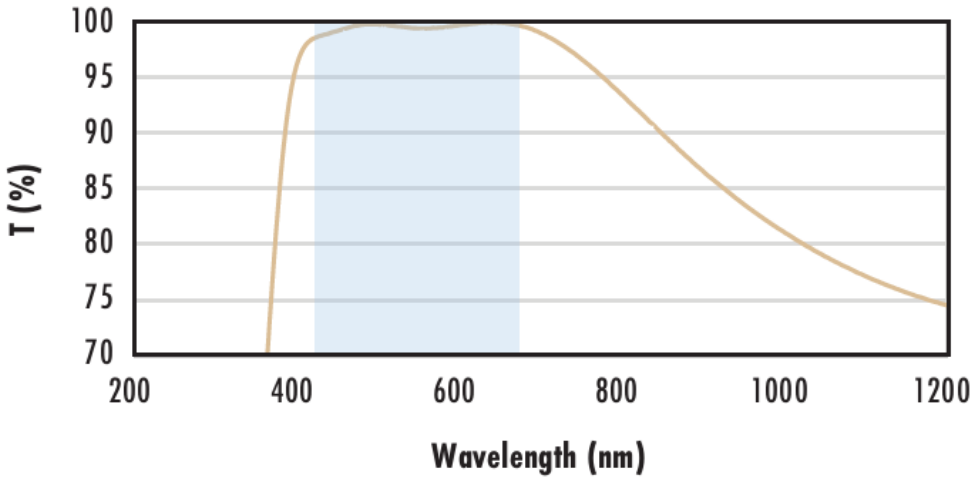
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

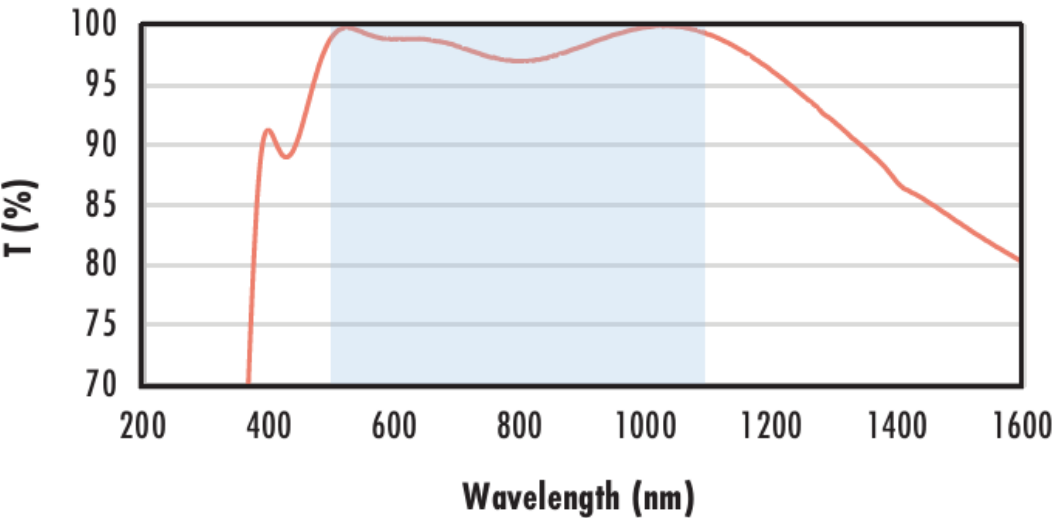
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

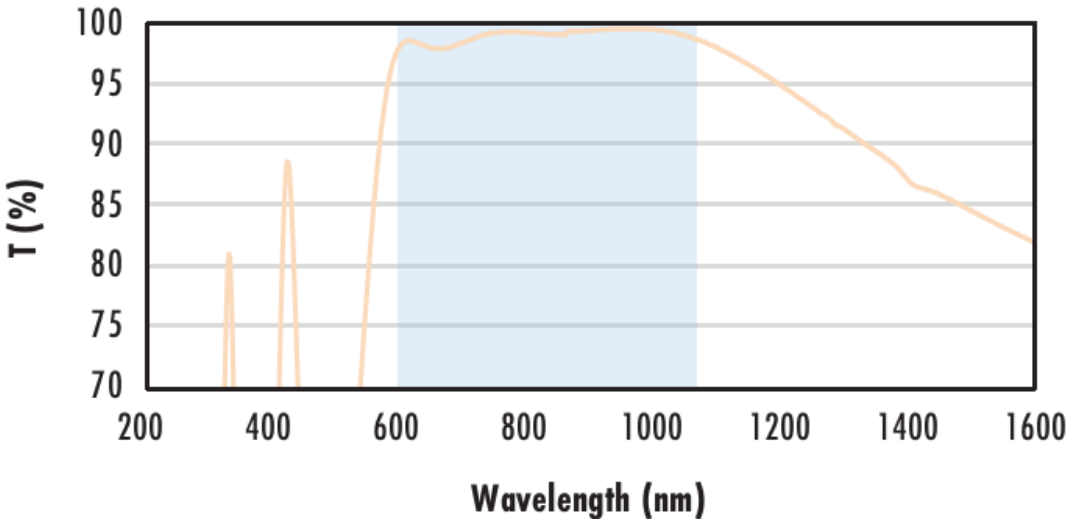
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

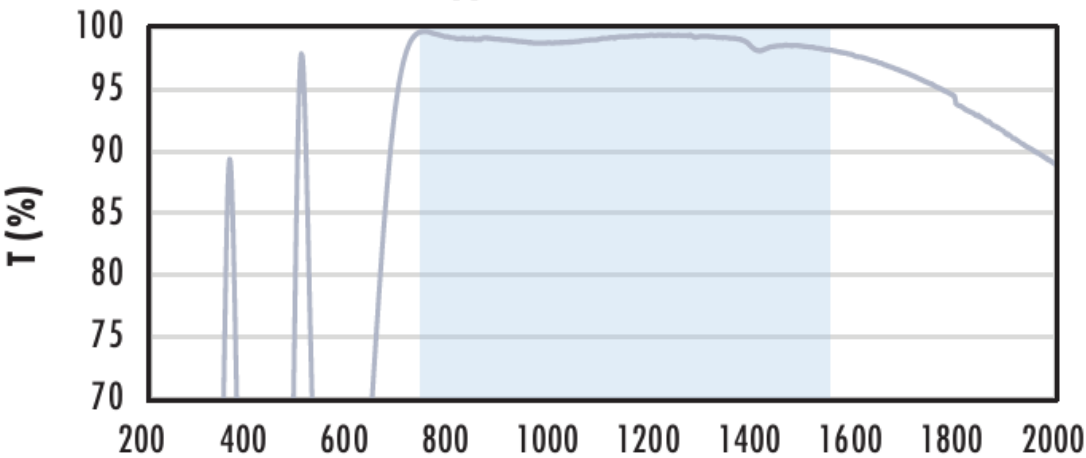
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

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

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Wavelength (nm)	
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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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