

TECHSPEC[®] 20mm Diameter x -40 FL, VIS 0° Coated, Plano-Concave Lens



Stock **#47-909** **6 In Stock**

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1

+

C\$69^{.65}

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Volume Pricing	
Qty 1-9	C\$69.65 each
Qty 10-25	C\$62.65 each
Qty 26-49	C\$55.65 each
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General

Type:

Plano-Concave Lens

Physical & Mechanical Properties

Diameter (mm):

20.00 +0.0/-0.025

	Bevel:
Protective as needed	
Center Thickness CT (mm):	3.50
Center Thickness Tolerance (mm):	±0.10
Centering (arcmin):	<1
Clear Aperture CA (mm):	19.00
Edge Thickness ET (mm):	5.92

Optical Properties

Effective Focal Length EFL (mm):	-40.00
Substrate:	N-BK7
f/#:	2.00
Numerical Aperture NA:	0.25
Coating:	VIS 0° (425-675nm)
Wavelength Range (nm):	425 - 675
Back Focal Length BFL (mm):	-42.31
Coating Specification:	R _{avg} ≤0.4% @ 425 - 675nm
Focal Length Specification Wavelength (nm):	587.6
Focal Length Tolerance (%):	±1
Radius R ₁ (mm):	-20.67
Surface Quality:	40-20
Damage Threshold, Reference:	5 J/cm² @ 532nm, 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 <0.4% Reflectance per Surface for 425 - 675nm
- Designed for 0° Angle of Incidence
- Various Coating Options: [Uncoated](#), [VIS-EXT](#), [MgF₂](#), [VIS-NIR](#), [YAG-BBAR](#), [NIR I](#), and [NIR II](#)

TECHSPEC® VIS 0° 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 0° Coated Plano-Concave (PCV) Lenses are best used in 0° angle of incidence situations and provide optimized transmission in the 425nm – 675nm range. These lenses are also available [Uncoated](#), [VIS-EXT](#), [MgF₂](#), [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 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.

[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 range, with the following specification:

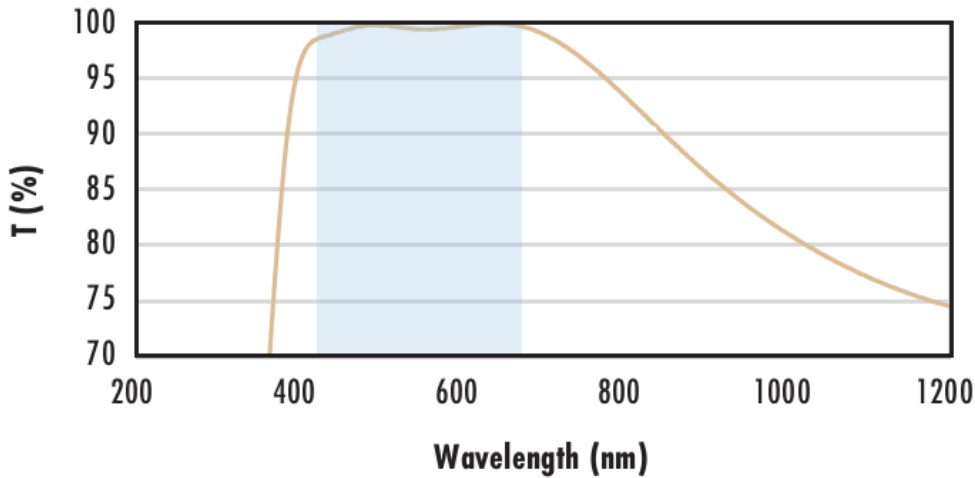
$R_{abs} \leq 0.25\% @ 880\text{nm}$
 $R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$
 $R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$



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

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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:

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

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:

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

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

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

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.

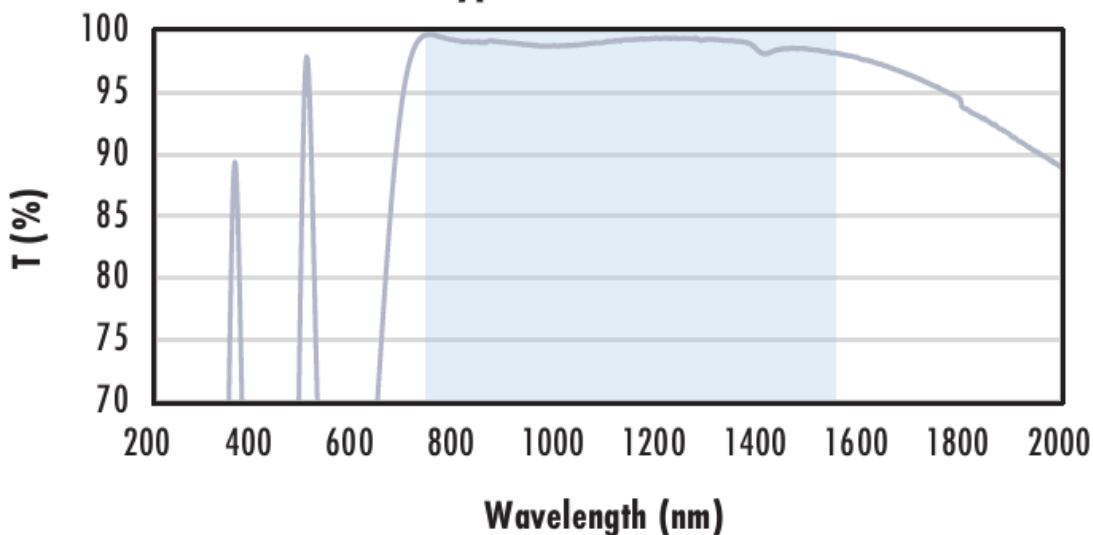
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

$$R_{abs} \leq 1.5\% \text{ @ } 750 - 800\text{nm}$$

$$R_{abs} \leq 1.0\% \text{ @ } 800 - 1550\text{nm}$$

$$R_{avg} \leq 0.7\% \text{ @ } 750 - 1550\text{nm}$$

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

