

TECHSPEC[®] 20mm Diameter x -100 FL, NIR II Coated, Plano-Concave Lens



Stock **#22-248** **5 In Stock**

[Other Coating Options](#)

-

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

Protective as needed	Bevel:
Center Thickness CT (mm):	3.50 ±0.10
Centering (arcmin):	<1
Clear Aperture CA (mm):	19.00
Edge Thickness ET (mm):	4.42

Optical Properties	
Effective Focal Length EFL (mm):	-100.00
Substrate:	N-BK7
f/#:	4.00
Numerical Aperture NA:	0.13
Coating:	NIR II (750-1550nm)
Wavelength Range (nm):	750 - 1550
Back Focal Length BFL (mm):	-102.88
Coating Specification:	R _{abs} ≤1.5% @ 750 - 800nm R _{abs} ≤1.0% @ 800 - 1550nm R _{avg} ≤0.7% @ 750 - 1550nm
Focal Length Specification Wavelength (nm):	587.6
Focal Length Tolerance (%):	±1
Radius R ₁ (mm):	-51.68
Surface Quality:	40-20
Damage Threshold, Reference:	8 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

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

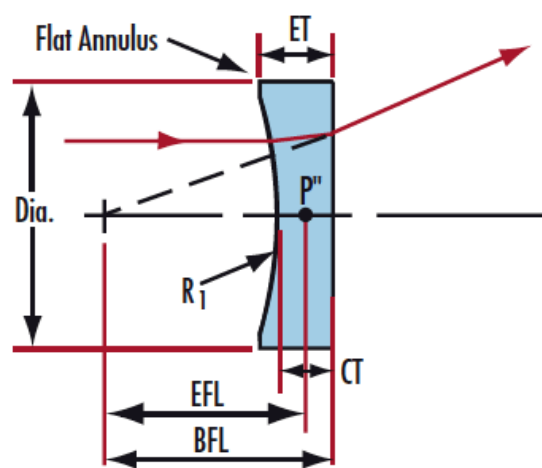
Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

Product Details

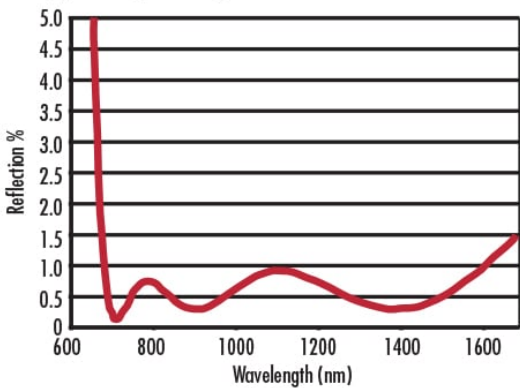
- AR Coated to Provide <0.7% Reflectance per Surface for 750 - 1550nm
- Designed for 0° Angle of Incidence
- Various Coating Options: [Uncoated](#), [VIS-EXT](#), [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), and [NIR I](#)

TECHSPEC® NIR II Coated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the lens's output side 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 II Coated Plano-Concave (PCV) Lenses offer optimal performance in the 750 to 1550nm range. These lenses are also available [Uncoated](#), [VIS-EXT](#), [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), or with [NIR I](#) AR coating options.

Technical Information

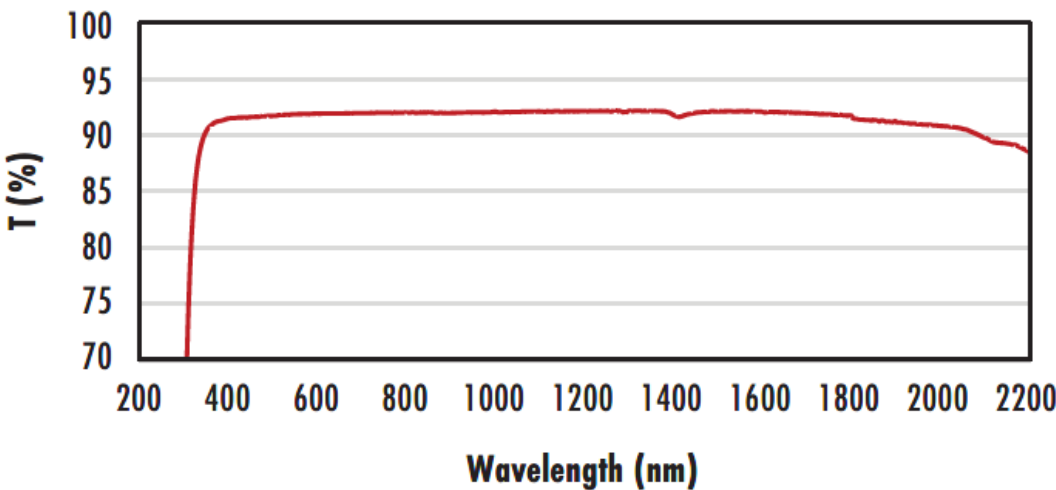


NIR II Coating
 $R_{avg} \leq 0.7\% @ 750 - 1550\text{nm}$, $R_{abs} \leq 1.0\% @ 800 - 1550\text{nm}$
Typ. Energy Density Limit: $8 \text{ J/cm}^2 @ 1064\text{nm}, 10\text{ns}$



N-BK7

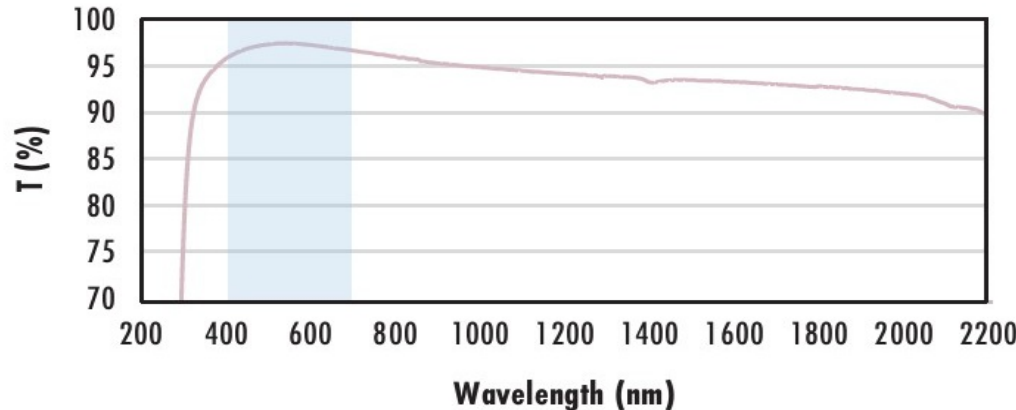
Uncoated N-BK7 Typical Transmission



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.

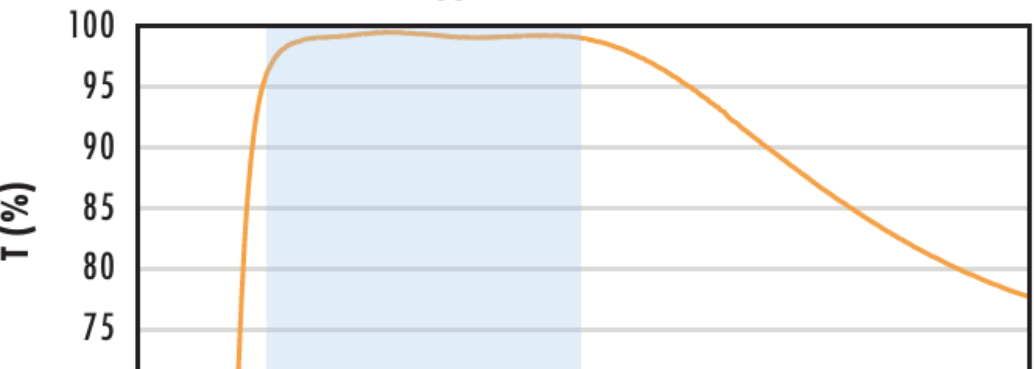
The blue shaded region indicates the coating design wavelength range, with the following specification:

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



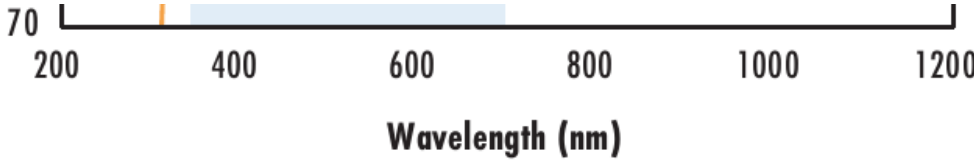
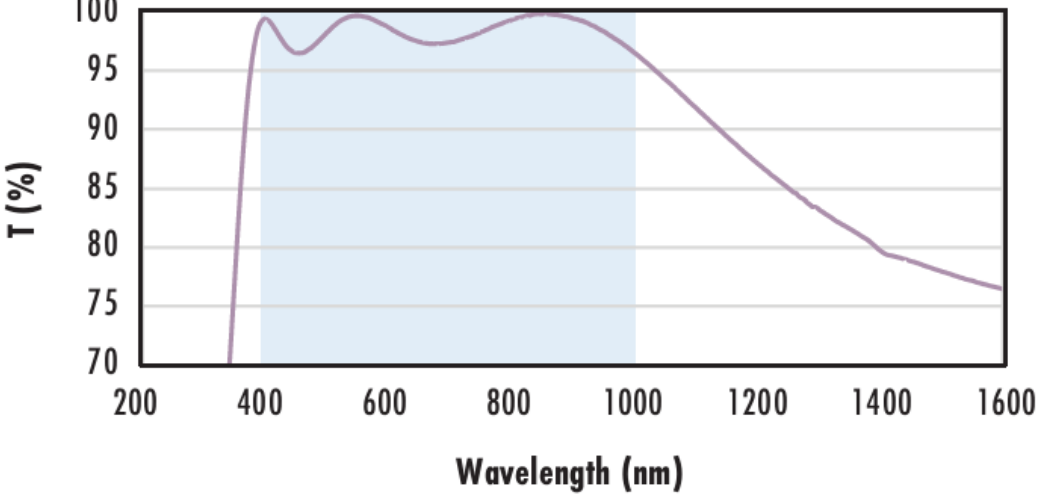
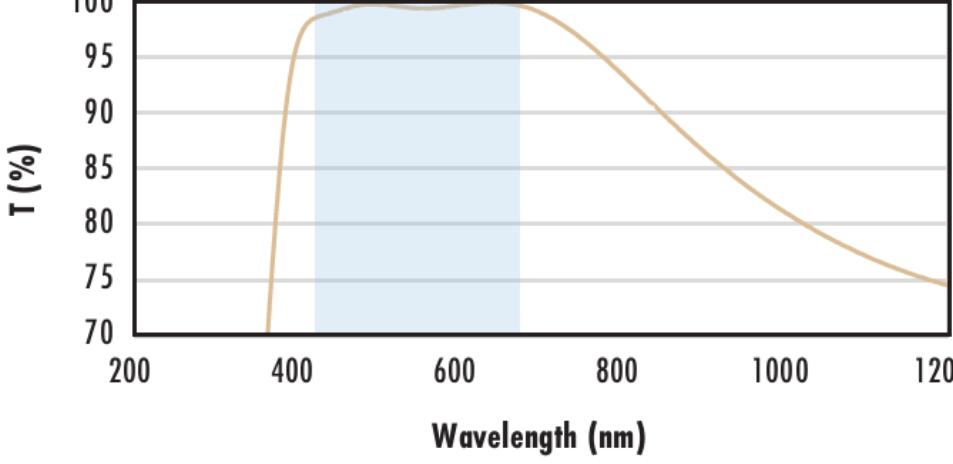
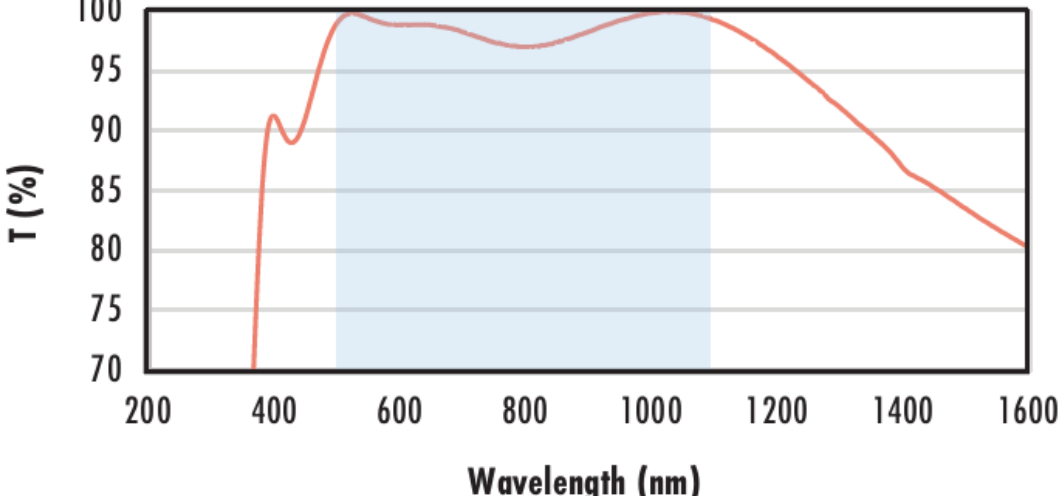
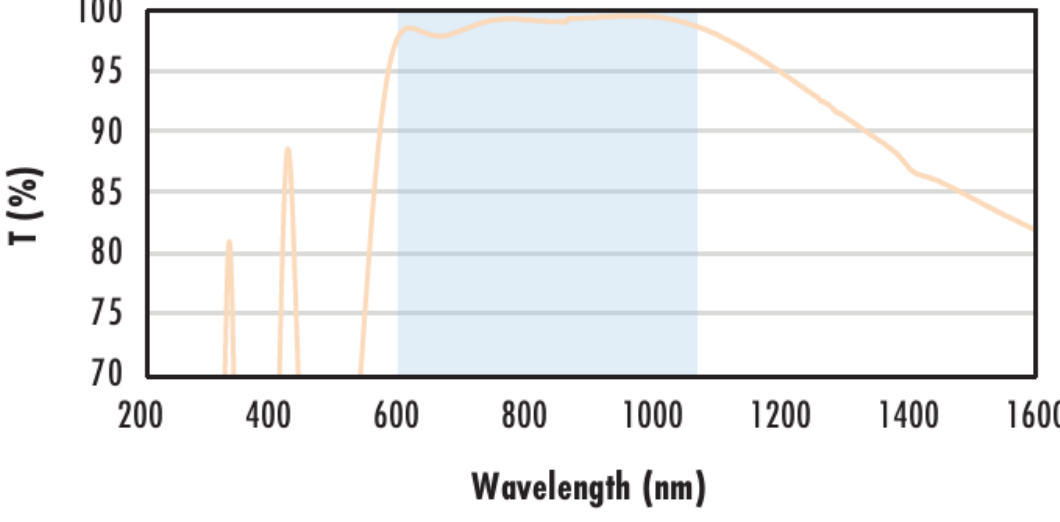
Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.

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.

[Click Here to Download Data](#)

	
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. 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: $R_{avg} \leq 0.4\% @ 425 - 675\text{nm}$ 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: $R_{abs} \leq 0.25\% @ 532\text{nm}$ $R_{abs} \leq 0.25\% @ 1064\text{nm}$ $R_{avg} \leq 1.0\% @ 500 - 1100\text{nm}$ 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: $R_{avg} \leq 0.5\% @ 600 - 1050\text{nm}$ 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 (1050-1600nm) coating at 0° AOI.

