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



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

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⊖ 1 ⊕ £39⁰⁰

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Volume Pricing	
Qty 1-9	£39.80 each
Qty 10-25	£35.80 each
Qty 26-49	£31.80 each
Need More?	Request Quote

ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Plano-Concave Lens **Type:**

Physical & Mechanical Properties

Diameter (mm):
20.00 +0.0/-0.025

Bevel:
Protective as needed

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 R₁ (mm):
-51.68

Surface Quality:
40-20

Damage Threshold, Reference:
8 J/cm² @ 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](#)

Need different specs or modifications?

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

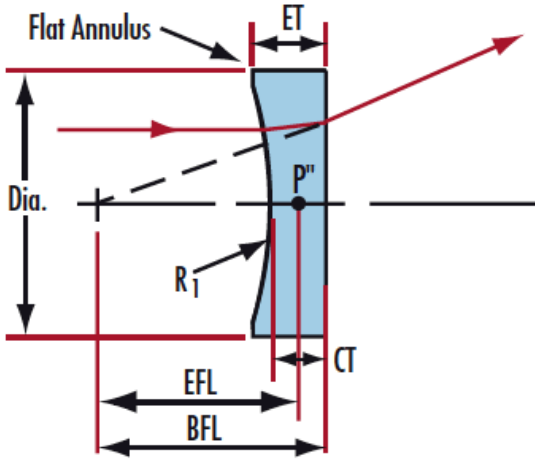
Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

Product Details

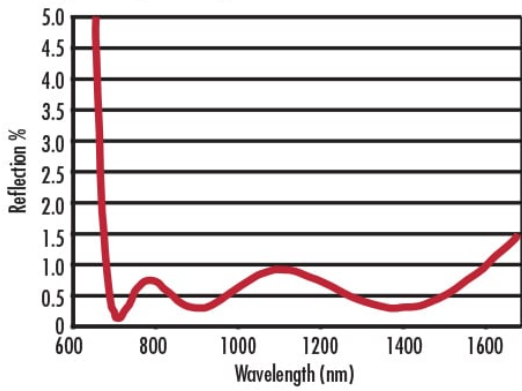
- AR Coated to Provide <0.7% Reflectance per Surface for 750 - 1550nm
- Designed for 0° Angle of Incidence
- Various Coating Options: [Uncoated](#), [VIS-EXT](#), [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), and [NIR I](#)

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.

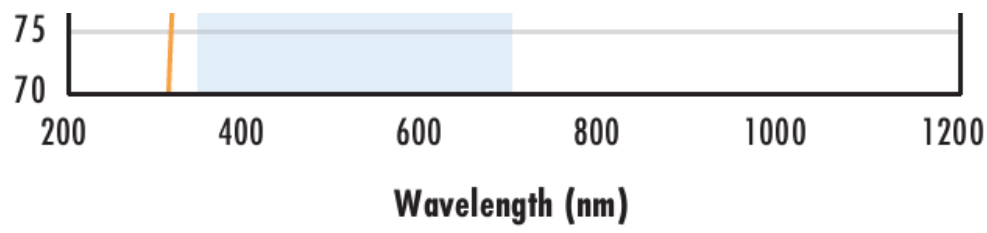
Technical Information



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

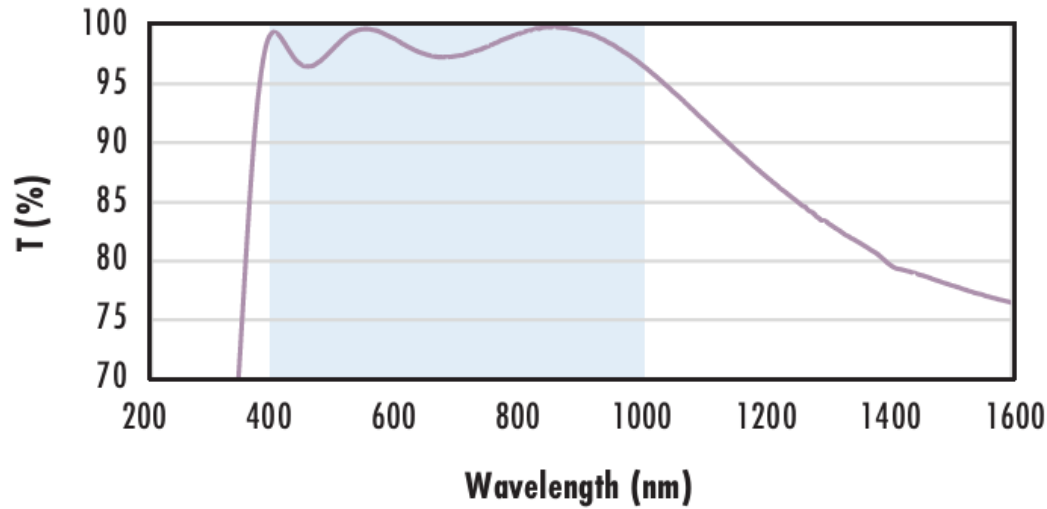


N-BK7	
<p align="center">Uncoated N-BK7 Typical Transmission</p>	<p>Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.</p> <p align="center">Click Here to Download Data</p>
<p align="center">N-BK7 with MgF₂ Coating Typical Transmission</p>	<p>Typical transmission of a 3mm thick N-BK7 window with MgF₂ (400-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p align="center">$R_{avg} \leq 1.75\% @ 400 - 700nm$ (N-BK7)</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p align="center">Click Here to Download Data</p>
<p align="center">N-BK7 with VIS-EXT Coating Typical Transmission</p>	<p>Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p align="center">$R_{avg} \leq 0.5\% @ 350 - 700nm$</p> <p>Data outside this range is not guaranteed and is for reference only.</p>



[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:

$$R_{\text{abs}} \leq 0.25\% @ 880\text{nm}$$

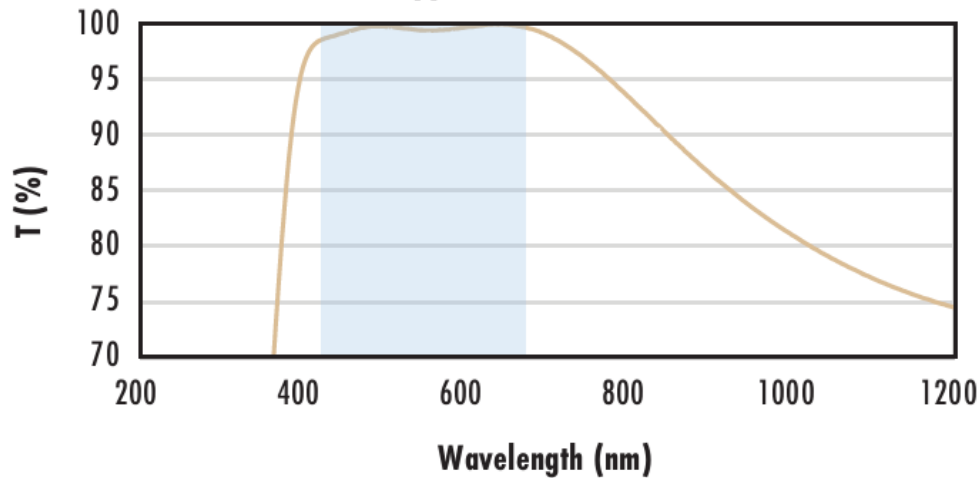
$$R_{\text{avg}} \leq 1.25\% @ 400 - 870\text{nm}$$

$$R_{\text{avg}} \leq 1.25\% @ 890 - 1000\text{nm}$$

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.

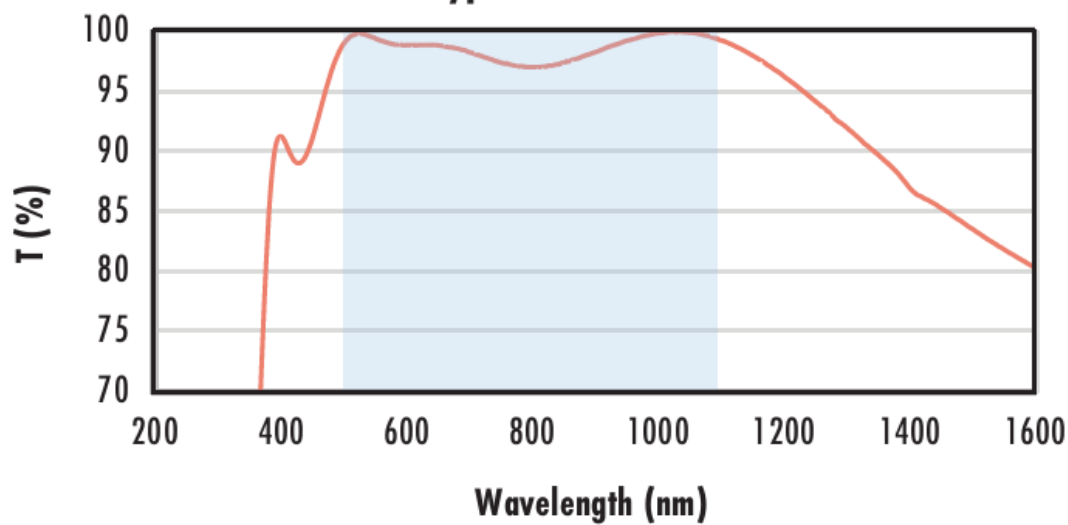
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

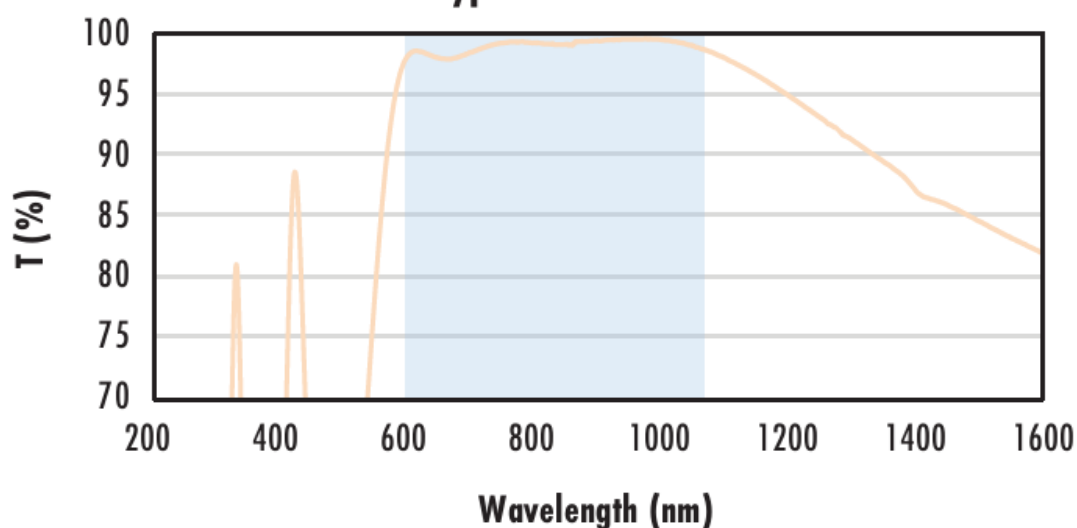
$$R_{\text{abs}} \leq 0.25\% @ 1064\text{nm}$$

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

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.

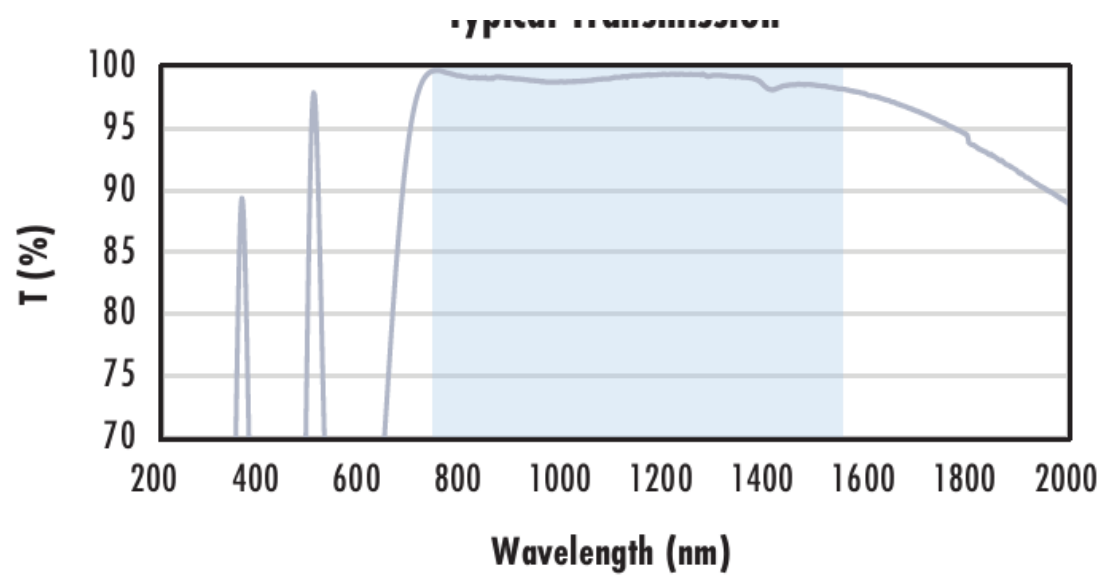
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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 (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.

[Click Here to Download Data](#)