

TECHSPEC<sup>®</sup> 50mm Diameter x -125 FL, NIR II Coated, Plano-Concave Lens



Stock **#68-004** **5 In Stock**

☐ [Other Coating Options](#)

-

1

+

£59<sup>00</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | £59.60 each                   |
| Qty 10-25      | £54.00 each                   |
| Qty 26-49      | £47.60 each                   |
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Product Downloads

General

Plano-Concave Lens

Type:

Physical & Mechanical Properties

|                   |                                  |
|-------------------|----------------------------------|
| 50.00 +0.0/-0.025 | Diameter (mm):                   |
| 5.00              | Center Thickness CT (mm):        |
| ±0.10             | Center Thickness Tolerance (mm): |
| <1                | Centering (arcmin):              |
| 49.00             | Clear Aperture CA (mm):          |
| 9.87              | Edge Thickness ET (mm):          |

|                                                                                                                                                  |                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Optical Properties                                                                                                                               |                                                       |
| -125.00                                                                                                                                          | Effective Focal Length EFL (mm):                      |
| N-BK7                                                                                                                                            | Substrate: <input type="checkbox"/>                   |
| 2.5                                                                                                                                              | f/#:                                                  |
| NIR II (750-1550nm)                                                                                                                              | Coating:                                              |
| 750 - 1550                                                                                                                                       | Wavelength Range (nm):                                |
| -128.3                                                                                                                                           | Back Focal Length BFL (mm):                           |
| Coating Specification:<br>R <sub>abs</sub> ≤1.5% @ 750 - 800nm<br>R <sub>abs</sub> ≤1.0% @ 800 - 1550nm<br>R <sub>avg</sub> ≤0.7% @ 750 - 1550nm |                                                       |
| 587.6                                                                                                                                            | Focal Length Specification Wavelength (nm):           |
| ±1.00                                                                                                                                            | Focal Length Tolerance (%):                           |
| -64.60                                                                                                                                           | Radius R <sub>1</sub> (mm):                           |
| 40-20                                                                                                                                            | Surface Quality:                                      |
| 8 J/cm <sup>2</sup> @ 1064nm, 10ns                                                                                                               | Damage Threshold, Reference: <input type="checkbox"/> |
| 1.5λ                                                                                                                                             | Power (P-V) @ 632.8nm:                                |
| λ/4                                                                                                                                              | Irregularity (P-V) @ 632.8nm:                         |

|                       |                             |
|-----------------------|-----------------------------|
| Regulatory Compliance |                             |
| Compliant             | RoHS 2015:                  |
| View                  | Certificate of Conformance: |
| Compliant             | Reach 235:                  |

## 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](#), [MgF<sub>2</sub>](#), [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](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), or with [NIR I](#) 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<sub>2</sub> Coating  
Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.

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

$$R_{avg} \leq 1.75\% \text{ @ } 400 - 700\text{nm (N-BK7)}$$

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:

$$R_{avg} \leq 0.5\% \text{ @ } 350 - 700\text{nm}$$

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



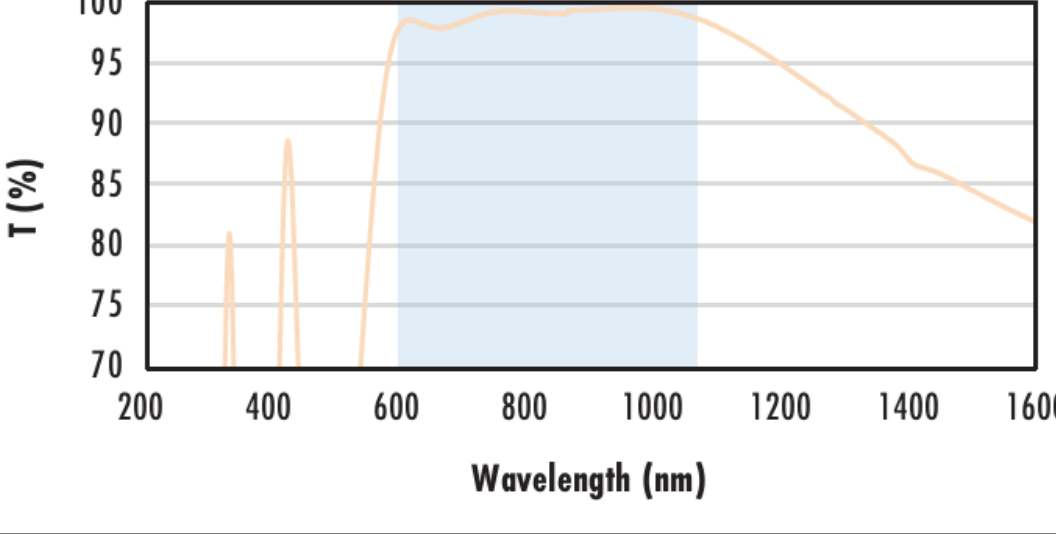
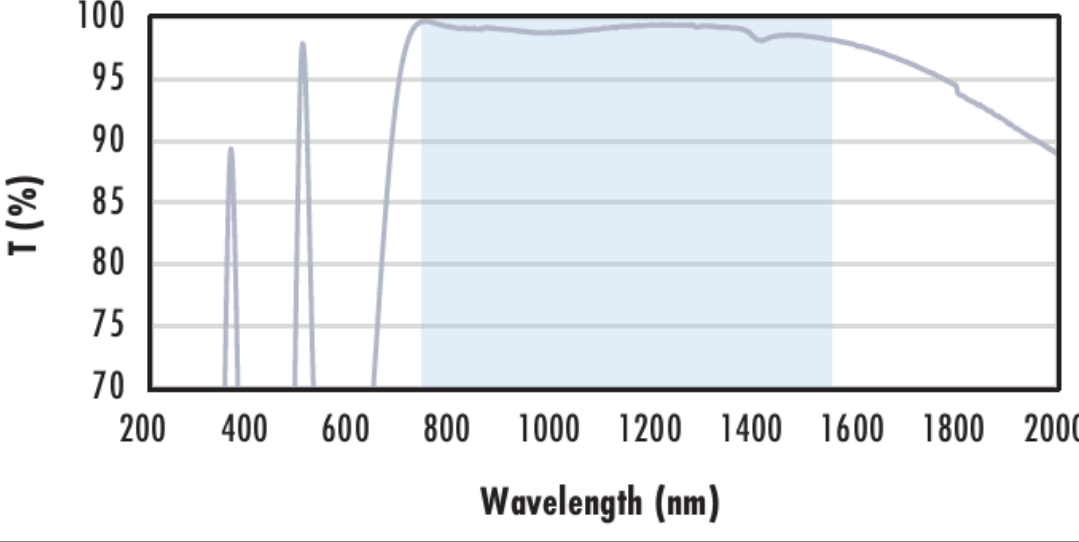
Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.

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

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

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

[Click Here to Download Data](#)

|                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p data-bbox="596 261 974 350"><b>N-BK7 with VIS 0° Coating</b><br/><b>Typical Transmission</b></p>       | <p data-bbox="1339 394 1843 442">Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.</p> <p data-bbox="1339 457 1850 504">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1478 519 1711 543"><math>R_{avg} \leq 0.4\%</math> @ 425 - 675nm</p> <p data-bbox="1339 557 1839 605">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 620 1711 644"><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                                          |
| <p data-bbox="569 857 1037 946"><b>N-BK7 with YAG-BBAR Coating</b><br/><b>Typical Transmission</b></p>   | <p data-bbox="1339 985 1843 1032">Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.</p> <p data-bbox="1339 1047 1850 1095">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1493 1110 1688 1133"><math>R_{abs} \leq 0.25\%</math> @ 532nm</p> <p data-bbox="1493 1136 1692 1160"><math>R_{abs} \leq 0.25\%</math> @ 1064nm</p> <p data-bbox="1472 1163 1713 1187"><math>R_{avg} \leq 1.0\%</math> @ 500 - 1100nm</p> <p data-bbox="1339 1202 1839 1249">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 1264 1711 1288"><a href="#">Click Here to Download Data</a></p>            |
| <p data-bbox="617 1495 1010 1584"><b>N-BK7 with NIR I Coating</b><br/><b>Typical Transmission</b></p>   | <p data-bbox="1339 1647 1843 1694">Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.</p> <p data-bbox="1339 1709 1850 1757">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1472 1771 1713 1795"><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</p> <p data-bbox="1339 1810 1839 1857">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 1872 1711 1896"><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                             |
| <p data-bbox="606 2133 1016 2223"><b>N-BK7 with NIR II Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1339 2255 1843 2303">Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.</p> <p data-bbox="1339 2318 1850 2365">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1474 2380 1703 2404"><math>R_{abs} \leq 1.5\%</math> @ 750 - 800nm</p> <p data-bbox="1474 2407 1709 2430"><math>R_{abs} \leq 1.0\%</math> @ 800 - 1550nm</p> <p data-bbox="1474 2433 1709 2457"><math>R_{avg} \leq 0.7\%</math> @ 750 - 1550nm</p> <p data-bbox="1339 2490 1839 2537">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 2552 1711 2576"><a href="#">Click Here to Download Data</a></p> |

# 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

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