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TECHSPEC®

50.0mm Diameter x -125 FL, NIR I Coated, Plano-Concave Lens



Stock **#49-539** **1 In Stock**

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-

1

+

£59<sup>00</sup>

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| Volume Pricing |                               |
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| 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):                                        |
| Protective as needed                  | Bevel:                                                |
| 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/#:                                                  |
| 0.20                                  | Numerical Aperture NA:                                |
| NIR I (600-1050nm)                    | Coating:                                              |
| 600 - 1050                            | Wavelength Range (nm):                                |
| -128.30                               | Back Focal Length BFL (mm):                           |
| R <sub>avg</sub> ≤0.5% @ 600 - 1050nm | Coating Specification:                                |
| 587.6                                 | Focal Length Specification Wavelength (nm):           |
| ±1                                    | Focal Length Tolerance (%):                           |
| -64.60                                | Radius R <sub>1</sub> (mm):                           |
| 40-20                                 | Surface Quality:                                      |
| 7 J/cm <sup>2</sup> @ 1064nm, 10ns    | Damage Threshold, By Design: <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

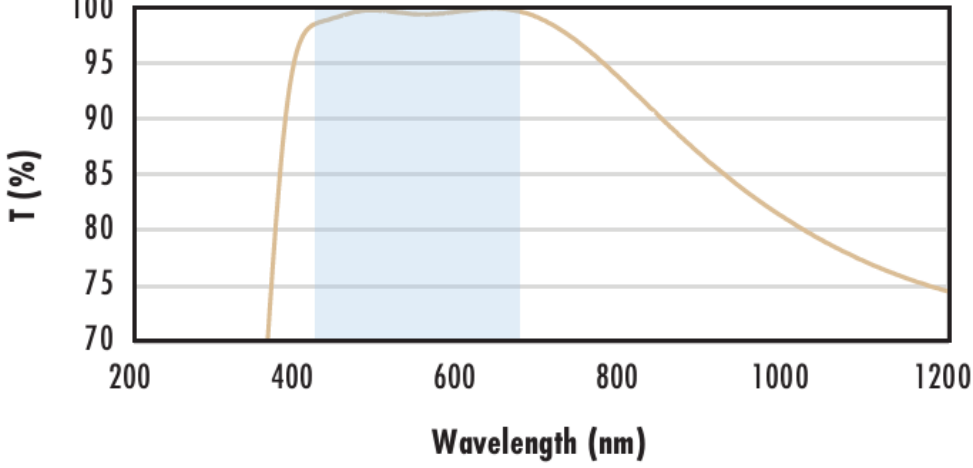
- AR Coated to Provide <0.5% Reflectance per Surface for 600 - 1050nm
- Designed for 0° Angle of Incidence
- Various Coating Options: [Uncoated](#), [VIS-EXT](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), and [NIR II](#)

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](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [YAG-BBAR](#), or with [NIR II](#) AR coating options.

## Technical Information



| N-BK7                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div>Uncoated N-BK7 Typical Transmission</div></div>                     | <div>Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.</div> <div><a href="#">Click Here to Download Data</a></div>                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <div><div>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</div></div> | <div>Typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><math>R_{avg} \leq 1.75\% \text{ @ } 400 - 700\text{nm (N-BK7)}</math></div> <div>Data outside this range is not guaranteed and is for reference only.</div> <div><a href="#">Click Here to Download Data</a></div>                                                                                                                              |
| <div><div>N-BK7 with VIS-EXT Coating Typical Transmission</div></div>         | <div>Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><math>R_{avg} \leq 0.5\% \text{ @ } 350 - 700\text{nm}</math></div> <div>Data outside this range is not guaranteed and is for reference only.</div> <div><a href="#">Click Here to Download Data</a></div>                                                                                                                                    |
| <div><div>N-BK7 with VIS-NIR Coating Typical Transmission</div></div>         | <div>Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><math>R_{abs} \leq 0.25\% \text{ @ } 880\text{nm}</math><br/><math>R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}</math><br/><math>R_{avg} \leq 1.25\% \text{ @ } 890 - 1000\text{nm}</math></div> <div>Data outside this range is not guaranteed and is for reference only.</div> <div><a href="#">Click Here to Download Data</a></div> |

|                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <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 1694 1160"><math>R_{abs} \leq 0.25\%</math> @ 1064nm</p> <p data-bbox="1474 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 1653 1843 1700">Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.</p> <p data-bbox="1339 1715 1850 1762">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1474 1777 1713 1801"><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</p> <p data-bbox="1339 1816 1839 1863">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 1878 1711 1902"><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 2261 1843 2309">Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.</p> <p data-bbox="1339 2323 1850 2371">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1474 2386 1705 2410"><math>R_{abs} \leq 1.5\%</math> @ 750 - 800nm</p> <p data-bbox="1474 2412 1711 2436"><math>R_{abs} \leq 1.0\%</math> @ 800 - 1550nm</p> <p data-bbox="1474 2439 1711 2463"><math>R_{avg} \leq 0.7\%</math> @ 750 - 1550nm</p> <p data-bbox="1339 2496 1839 2543">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 2558 1711 2582"><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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