

TECHSPEC<sup>®</sup> 3mm Dia. x 3mm FL, NIR II Coated, Double-Convex Lens



Stock **#67-590** **1 In Stock**

☐ [Other Coating Options](#)

-

1

+

C\$100<sup>.10</sup>

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General

Type:  
Double-Convex Lens

Physical & Mechanical Properties

Diameter (mm):  
3.00 +0.0/-0.025

|                |                                  |
|----------------|----------------------------------|
| 30-45, typical | Centering (arcmin):              |
| 2.30           | Center Thickness CT (mm):        |
| ±0.05          | Center Thickness Tolerance (mm): |
| 1.62           | Edge Thickness ET (mm):          |
| 2.5            | Clear Aperture CA (mm):          |

Optical Properties

|                                                                                                                        |                                             |
|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| 2.21                                                                                                                   | Back Focal Length BFL (mm):                 |
| 3.00                                                                                                                   | Effective Focal Length EFL (mm):            |
| NIR II (750-1550nm)                                                                                                    | Coating:                                    |
| 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 | Coating Specification:                      |
| N-SF5                                                                                                                  | Substrate: □                                |
| 20-10                                                                                                                  | Surface Quality:                            |
| 1.5λ                                                                                                                   | Power (P-V) @ 632.8nm:                      |
| λ/4                                                                                                                    | Irregularity (P-V) @ 632.8nm:               |
| 3.50                                                                                                                   | Radius R <sub>1</sub> =R <sub>2</sub> (mm): |
| 1.00                                                                                                                   | f/#:                                        |
| 587.6                                                                                                                  | Focal Length Specification Wavelength (nm): |
| ±1.00                                                                                                                  | Focal Length Tolerance (%):                 |
| 0.50                                                                                                                   | Numerical Aperture NA:                      |
| 750 - 1550                                                                                                             | Wavelength Range (nm):                      |
| 8 J/cm <sup>2</sup> @ 1064nm, 10ns                                                                                     | Damage Threshold, By Design: □              |

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
- Minimize Aberrations Including Spherical and Coma
- [UV Fused Silica DCX Lenses](#) Available
- Other Coating Options Available: [Uncoated](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [NIR I](#), [VIS-EXT](#), [VIS-NIR](#), and [YAG-BBAR](#)

TECHSPEC® NIR II Coated Double-Convex (DCX) Lenses, also referred to as bi-convex lenses, have two positive, symmetrical faces with equal radii on both sides. These lenses are generally recommended for finite imaging applications with a conjugate ratio (ratio between object distance and image distance) between 0.2 and 5. At a conjugate ratio of 1, aberrations such as spherical aberration, chromatic aberration, coma, and distortion are minimized or cancelled due to the symmetric lens design. TECHSPEC® NIR II Coated Double-Convex Lenses are available in a variety of substrates and coating options for the visible and NIR spectra.

## 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 MgF<sub>2</sub> (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><b>N-BK7 with VIS 0° Coating</b><br/><b>Typical Transmission</b></p>     | <p>Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{avg} \leq 0.4\%</math> @ 425 - 675nm</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p>                                                                                                          |
| <p><b>N-BK7 with YAG-BBAR Coating</b><br/><b>Typical Transmission</b></p>  | <p>Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{abs} \leq 0.25\%</math> @ 532nm<br/><math>R_{abs} \leq 0.25\%</math> @ 1064nm<br/><math>R_{avg} \leq 1.0\%</math> @ 500 - 1100nm</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p>           |
| <p><b>N-BK7 with NIR I Coating</b><br/><b>Typical Transmission</b></p>    | <p>Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p>                                                                                                       |
| <p><b>N-BK7 with NIR II Coating</b><br/><b>Typical Transmission</b></p>   | <p>Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{abs} \leq 1.5\%</math> @ 750 - 800nm<br/><math>R_{abs} \leq 1.0\%</math> @ 800 - 1550nm<br/><math>R_{avg} \leq 0.7\%</math> @ 750 - 1550nm</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><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.

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  - Tight tolerances and complex geometries
  - Scalable production—from prototype to volume
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## Compatible Mounts

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