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TECHSPEC<sup>®</sup> 9mm Dia. x 9mm FL, VIS-NIR Coated, Double-Convex Lens



Stock **#45-866** 20+ In Stock

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-

1

+

£39<sup>.20</sup>

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| Qty 1-9        | £39.20 each                   |
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General

Double-Convex Lens

Type:

Physical & Mechanical Properties

|                                                                                                                     |                                             |
|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| 9.00 +0.0/-0.025                                                                                                    | Diameter (mm):                              |
| <3                                                                                                                  | Centering (arcmin):                         |
| Protective as needed                                                                                                | Bevel:                                      |
| 3.45                                                                                                                | Center Thickness CT (mm):                   |
| ±0.05                                                                                                               | Center Thickness Tolerance (mm):            |
| 1.60                                                                                                                | Edge Thickness ET (mm):                     |
| 8.1                                                                                                                 | Clear Aperture CA (mm):                     |
| Optical Properties                                                                                                  |                                             |
| 7.90                                                                                                                | Back Focal Length BFL (mm):                 |
| 9.00                                                                                                                | Effective Focal Length EFL (mm):            |
| VIS-NIR (400-1000nm)                                                                                                | Coating:                                    |
| R <sub>abs</sub> ≤0.25% @ 880nm<br>R <sub>avg</sub> ≤1.25% @ 400 - 870 nm<br>R <sub>avg</sub> ≤1.25% @ 890 - 1000nm | Coating Specification:                      |
| N-SF5                                                                                                               | Substrate: □                                |
| 40-20                                                                                                               | Surface Quality:                            |
| 1.5λ                                                                                                                | Power (P-V) @ 632.8nm:                      |
| λ/4                                                                                                                 | Irregularity (P-V) @ 632.8nm:               |
| 11.38                                                                                                               | Radius R <sub>1</sub> =R <sub>2</sub> (mm): |
| 1.00                                                                                                                | f#:                                         |
| 587.6                                                                                                               | Focal Length Specification Wavelength (nm): |
| ±1                                                                                                                  | Focal Length Tolerance (%):                 |
| 0.50                                                                                                                | Numerical Aperture NA:                      |
| 400 - 1000                                                                                                          | Wavelength Range (nm):                      |
| 5 J/cm² @ 532nm, 10ns                                                                                               | Damage Threshold, By Design: □              |
| Regulatory Compliance                                                                                               |                                             |
| Compliant                                                                                                           | RoHS 2015:                                  |
| View                                                                                                                | Certificate of Conformance:                 |
| Compliant                                                                                                           | Reach 235:                                  |

## Product Details

- AR Coated to Provide <1.25% Reflectance per Surface for 400 - 1000nm
- 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](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#)

TECHSPEC® VIS-NIR 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® VIS-NIR Coated Double-Convex Lenses are available in a variety of substrates and coating options for the visible and NIR spectra.

## 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:

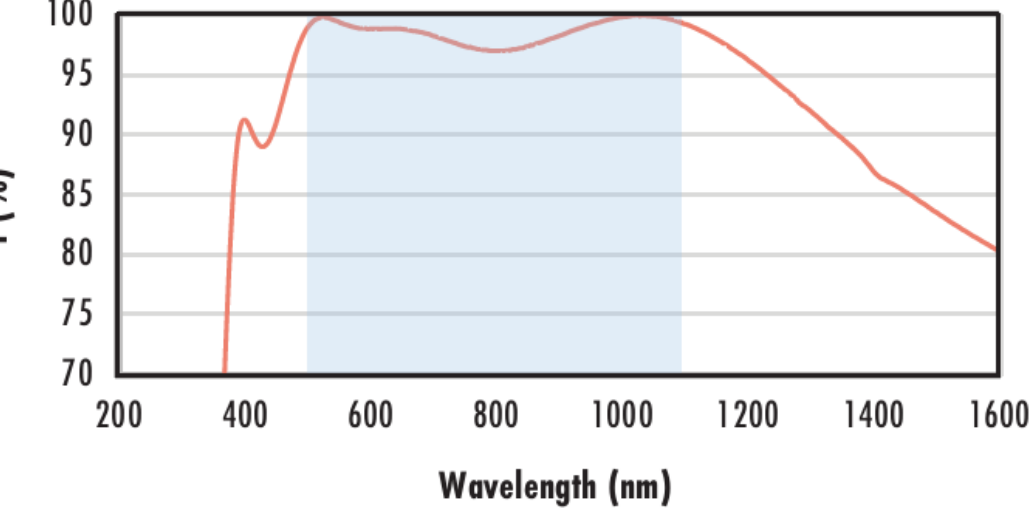
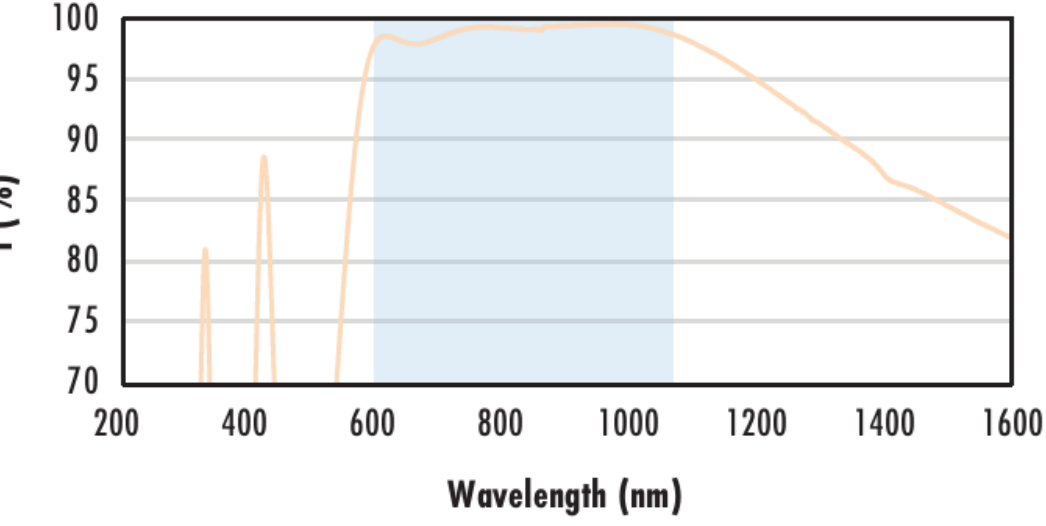
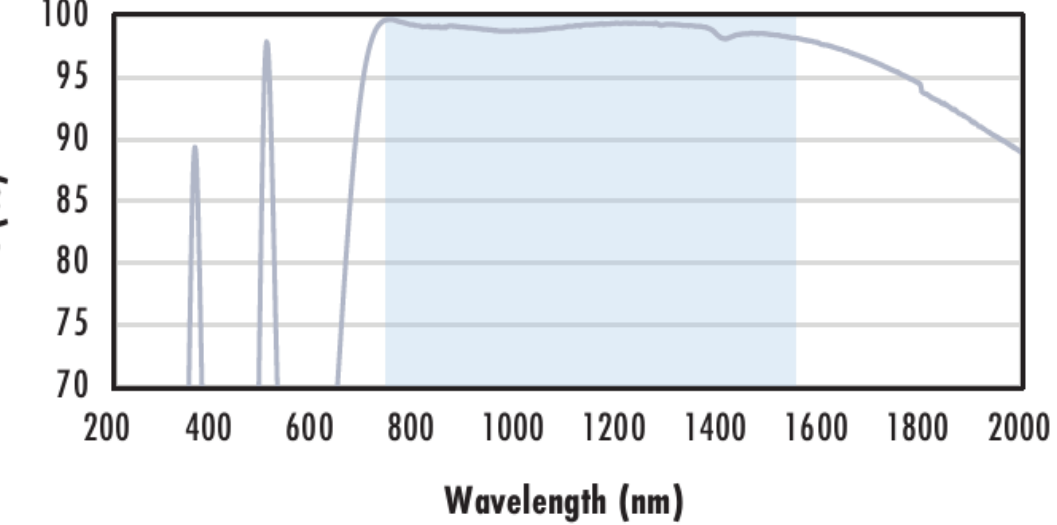
$$R_{abs} \leq 0.25\% \text{ @ } 880\text{nm}$$

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

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

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

[Click Here to Download Data](#)

|                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div><div>N-BK7 with VIS 0° Coating</div><div>Typical Transmission</div></div><div></div></div>    | <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>                                                                                                          |
| <div><div><div>N-BK7 with YAG-BBAR Coating</div><div>Typical Transmission</div></div><div></div></div> | <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>           |
| <div><div><div>N-BK7 with NIR I Coating</div><div>Typical Transmission</div></div><div></div></div>   | <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>                                                                                                       |
| <div><div><div>N-BK7 with NIR II Coating</div><div>Typical Transmission</div></div><div></div></div>  | <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> |

Coating Curves

# 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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