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TECHSPEC<sup>®</sup> 5mm Dia. x 20mm FL, YAG-BBAR Coated, Inked, Double-Convex Lens



YAG-BBAR Coated Double-Convex (DCX) Lenses



Stock **#89-214-INK** [CONTACT US](#)

-

1

+

C\$98<sup>-70</sup>

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| Volume Pricing |                               |
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| Qty 1-9        | C\$98.70 each                 |
| Qty 10-24      | C\$88.90 each                 |
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General

Type:

Double-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

5.00 ±0.025

|                                                                                                              |                                             |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <3                                                                                                           | Centering (arcmin):                         |
| Protective as needed                                                                                         | Bevel:                                      |
| 1.50                                                                                                         | Center Thickness CT (mm):                   |
| ±0.05                                                                                                        | Center Thickness Tolerance (mm):            |
| 1.19                                                                                                         | Edge Thickness ET (mm):                     |
| 4.5                                                                                                          | Clear Aperture CA (mm):                     |
| Optical Properties                                                                                           |                                             |
| 19.5                                                                                                         | Back Focal Length BFL (mm):                 |
| 20.00                                                                                                        | Effective Focal Length EFL (mm):            |
| YAG-BBAR (500-1100nm)                                                                                        | Coating:                                    |
| R <sub>abs</sub> <0.25% @ 532nm<br>R <sub>abs</sub> <0.25% @ 1064nm<br>R <sub>avg</sub> <1.0% @ 500 - 1100nm | Coating Specification:                      |
| N-BK7                                                                                                        | Substrate: □                                |
| 40-20                                                                                                        | Surface Quality:                            |
| 20.41                                                                                                        | Radius R <sub>1</sub> =R <sub>2</sub> (mm): |
| 4.00                                                                                                         | f/#:                                        |
| 587.6                                                                                                        | Focal Length Specification Wavelength (nm): |
| ±1                                                                                                           | Focal Length Tolerance (%):                 |
| 0.13                                                                                                         | Numerical Aperture NA:                      |
| 350 - 2200                                                                                                   | Wavelength Range (nm):                      |
| Regulatory Compliance                                                                                        |                                             |
| View                                                                                                         | Certificate of Conformance:                 |

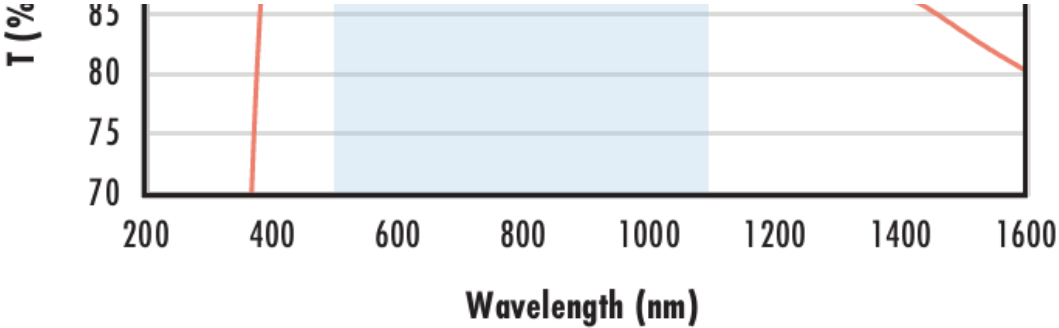
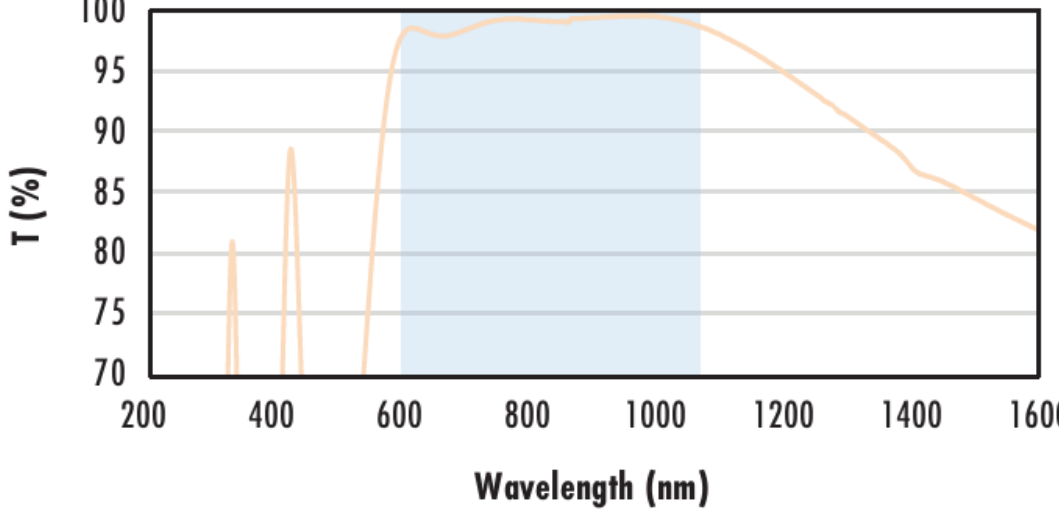
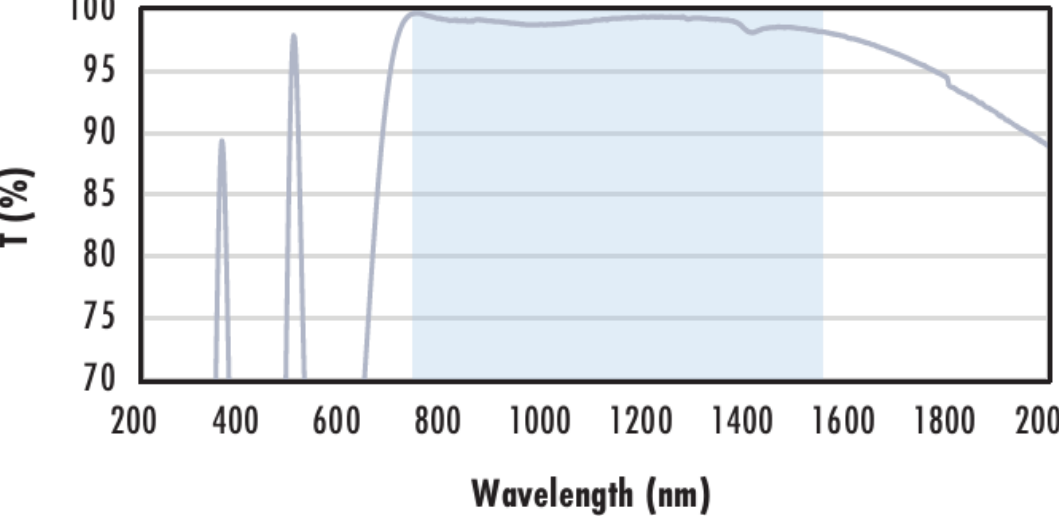
## Product Details

- Optimized for R<0.25% @ 532nm and 1064nm
  - Mnimize 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 [VIS-NIR](#)
- TECHSPEC® YAG-BBAR 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 YAG-BBAR Coated Double-Convex Lenses are available in a variety of substrates and coating options for the visible and NIR spectra.

## Technical Information



|                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>2004006008001000120014001600180020002200</div> <div>Wavelength (nm)</div>                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <div>N-BK7 with MgF<sub>2</sub> Coating<br/>Typical Transmission</div> <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>N-BK7 with VIS-EXT Coating<br/>Typical Transmission</div> <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>N-BK7 with VIS-NIR Coating<br/>Typical Transmission</div> <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> |
| <div>N-BK7 with VIS 0° Coating<br/>Typical Transmission</div> <div></div>        | <div>Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) 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 0.4\% \text{ @ } 425 - 675\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>N-BK7 with YAG-BBAR Coating<br/>Typical Transmission</div> <div></div>      | <div>Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) 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{ @ } 532\text{nm}</math></div>                                                                                                                                                                                                                                                                              |

|                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                             | <p><math>R_{abs} \leq 0.25\% @ 1064\text{nm}</math><br/><math>R_{avg} \leq 1.0\% @ 500 - 1100\text{nm}</math></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\% @ 600 - 1050\text{nm}</math></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\% @ 750 - 800\text{nm}</math><br/><math>R_{abs} \leq 1.0\% @ 800 - 1550\text{nm}</math><br/><math>R_{avg} \leq 0.7\% @ 750 - 1550\text{nm}</math></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.

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

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Compatible Mounts