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TECHSPEC<sup>®</sup> 3mm Dia. x 9mm FL YAG-BBAR Coated, Double-Convex Lens



YAG-BBAR Coated Double-Convex (DCX) Lenses



Stock **#89-208** 5 In Stock

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-

1

+

S\$103<sup>00</sup>

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| Qty 1-9        | S\$103.60 each                |
| Qty 10-24      | S\$93.80 each                 |
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General

Double-Convex Lens

Type:

Physical & Mechanical Properties

Diameter (mm):

|                                                                                                              |                                                       |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 3.00 +0.0/-0.025                                                                                             |                                                       |
| <3                                                                                                           | Centering (arcmin):                                   |
| Protective as needed                                                                                         | Bevel:                                                |
| 1.60                                                                                                         | Center Thickness CT (mm):                             |
| ±0.05                                                                                                        | Center Thickness Tolerance (mm):                      |
| 1.35                                                                                                         | Edge Thickness ET (mm):                               |
| 2.5                                                                                                          | Clear Aperture CA (mm):                               |
| Optical Properties                                                                                           |                                                       |
| 8.46                                                                                                         | Back Focal Length BFL (mm):                           |
| 9.00                                                                                                         | 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: <input type="checkbox"/>                   |
| 20-10                                                                                                        | Surface Quality:                                      |
| 1.5λ                                                                                                         | Power (P-V) @ 632.8nm:                                |
| λ/4                                                                                                          | Irregularity (P-V) @ 632.8nm:                         |
| 9.02                                                                                                         | Radius R <sub>1</sub> =R <sub>2</sub> (mm):           |
| 3.00                                                                                                         | f##:                                                  |
| 587.6                                                                                                        | Focal Length Specification Wavelength (nm):           |
| ±1                                                                                                           | Focal Length Tolerance (%):                           |
| 0.17                                                                                                         | Numerical Aperture NA:                                |
| 350 - 2200                                                                                                   | Wavelength Range (nm):                                |
| 5 J/cm <sup>2</sup> @ 532nm, 10ns                                                                            | Damage Threshold, By Design: <input type="checkbox"/> |

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

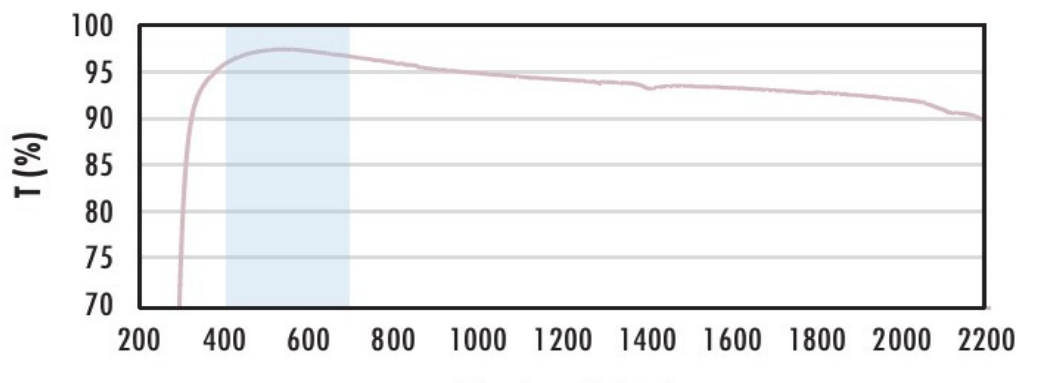
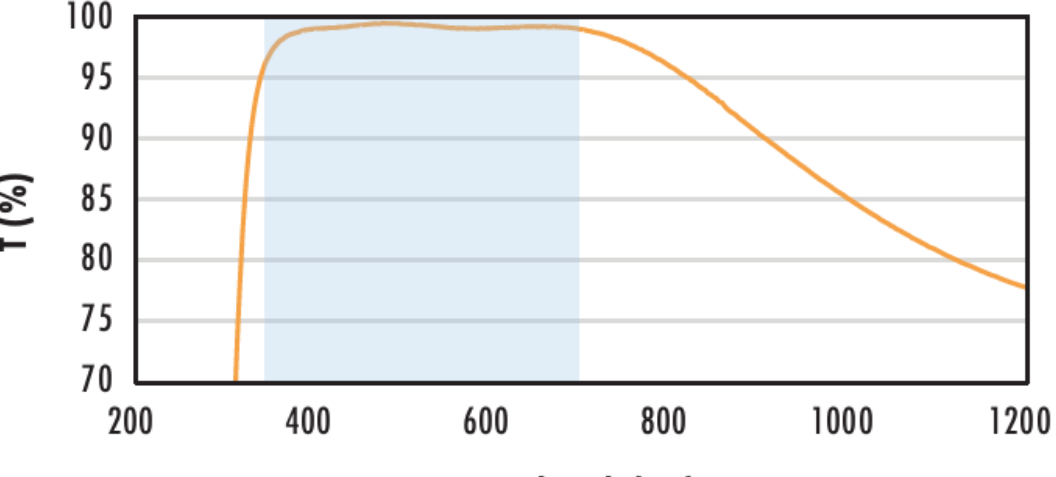
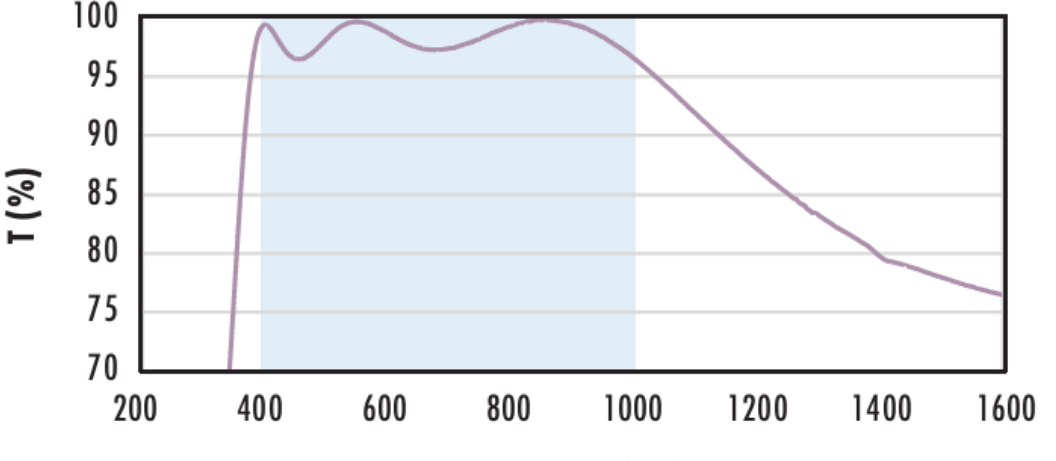
## Product Details

- Optimized for R<0.25% @ 532nm and 1064nm
- 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 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 data-bbox="262 71 1249 593"><h3>Uncoated N-BK7 Typical Transmission</h3></div>                        | <div data-bbox="1339 278 1841 368"><p>Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.</p><p><a href="#">Click Here to Download Data</a></p></div>                                                                                                                                                                                                                                                                                                                                                                                                        |
| <div data-bbox="262 667 1249 1142"><h3>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</h3></div> | <div data-bbox="1339 756 1841 1009"><p>Typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) 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 1.75\% \text{ @ } 400 - 700\text{nm (N-BK7)}</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></div>                                                                                                                               |
| <div data-bbox="262 1187 1249 1765"><h3>N-BK7 with VIS-EXT Coating Typical Transmission</h3></div>       | <div data-bbox="1339 1350 1841 1602"><p>Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) 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\% \text{ @ } 350 - 700\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></div>                                                                                                                                    |
| <div data-bbox="262 1825 1249 2389"><h3>N-BK7 with VIS-NIR Coating Typical Transmission</h3></div>       | <div data-bbox="1339 1944 1841 2270"><p>Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) 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\% \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></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 data-bbox="262 2448 1249 2878"><h3>N-BK7 with VIS 0° Coating Typical Transmission</h3></div>        | <div data-bbox="1339 2582 1841 2834"><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\% \text{ @ } 425 - 675\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></div>                                                                                                                                     |

|                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>20040060080010001200</div> <div>Wavelength (nm)</div>                                                                                                                                                                                                                                                                                                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <div><div>N-BK7 with YAG-BBAR Coating</div><div>Typical Transmission</div><div><div><div>T (%)</div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div><div>1400</div><div>1600</div></div></div><div><div>Wavelength (nm)</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><div><div><math>R_{abs} \leq 0.25\%</math> @ 532nm</div><div><math>R_{abs} \leq 0.25\%</math> @ 1064nm</div><div><math>R_{avg} \leq 1.0\%</math> @ 500 - 1100nm</div></div></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 NIR I Coating</div><div>Typical Transmission</div><div><div><div>T (%)</div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div><div>1400</div><div>1600</div></div></div><div><div>Wavelength (nm)</div></div></div>                                |  | <div>Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><div><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</div></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 NIR II Coating</div><div>Typical Transmission</div><div><div><div>T (%)</div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div><div>1400</div><div>1600</div><div>1800</div><div>2000</div></div></div><div><div>Wavelength (nm)</div></div></div> |  | <div>Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><div><div><math>R_{abs} \leq 1.5\%</math> @ 750 - 800nm</div><div><math>R_{abs} \leq 1.0\%</math> @ 800 - 1550nm</div><div><math>R_{avg} \leq 0.7\%</math> @ 750 - 1550nm</div></div></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> |

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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