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TECHSPEC<sup>®</sup> 10mm Dia. x 50mm FL, YAG-BBAR Coated, Double-Convex Lens



YAG-BBAR Coated Double-Convex (DCX) Lenses



Stock **#89-237** **6 In Stock**

☐ [Other Coating Options](#)

-1+

₹3,464

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| Volume Pricing |                               |
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| Qty 1-9        | ₹3,464 each                   |
| Qty 10-24      | ₹3,114 each                   |
| Qty 25-99      | ₹2,783 each                   |
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General

Type:

Double-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

|                                                                                                              |                                                       |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 10.00 +0.0/-0.025                                                                                            |                                                       |
| <1                                                                                                           | Centering (arcmin):                                   |
|                                                                                                              | Bevel:                                                |
| Protective as needed                                                                                         |                                                       |
|                                                                                                              | Center Thickness CT (mm):                             |
| 2.50                                                                                                         |                                                       |
|                                                                                                              | Center Thickness Tolerance (mm):                      |
| ±0.05                                                                                                        |                                                       |
|                                                                                                              | Edge Thickness ET (mm):                               |
| 2.01                                                                                                         |                                                       |
|                                                                                                              | Clear Aperture CA (mm):                               |
| 9.00                                                                                                         |                                                       |
| Optical Properties                                                                                           |                                                       |
|                                                                                                              | Back Focal Length BFL (mm):                           |
| 49.17                                                                                                        |                                                       |
|                                                                                                              | Effective Focal Length EFL (mm):                      |
| 50.00                                                                                                        |                                                       |
|                                                                                                              | Coating:                                              |
| YAG-BBAR (500-1100nm)                                                                                        |                                                       |
|                                                                                                              | Coating Specification:                                |
| R <sub>abs</sub> <0.25% @ 532nm<br>R <sub>abs</sub> <0.25% @ 1064nm<br>R <sub>avg</sub> <1.0% @ 500 - 1100nm |                                                       |
|                                                                                                              | Substrate: <input type="checkbox"/>                   |
| N-BK7                                                                                                        |                                                       |
|                                                                                                              | Surface Quality:                                      |
| 40-20                                                                                                        |                                                       |
|                                                                                                              | Power (P-V) @ 632.8nm:                                |
| 1.5λ                                                                                                         |                                                       |
|                                                                                                              | Irregularity (P-V) @ 632.8nm:                         |
| λ/4                                                                                                          |                                                       |
|                                                                                                              | Radius R <sub>1</sub> =R <sub>2</sub> (mm):           |
| 51.25                                                                                                        |                                                       |
|                                                                                                              | f##:                                                  |
| 5.00                                                                                                         |                                                       |
|                                                                                                              | Focal Length Specification Wavelength (nm):           |
| 587.6                                                                                                        |                                                       |
|                                                                                                              | Focal Length Tolerance (%):                           |
| ±1                                                                                                           |                                                       |
|                                                                                                              | Numerical Aperture NA:                                |
| 0.10                                                                                                         |                                                       |
|                                                                                                              | Wavelength Range (nm):                                |
| 350 - 2200                                                                                                   |                                                       |
|                                                                                                              | Damage Threshold, By Design: <input type="checkbox"/> |
| 5 J/cm² @ 532nm, 10ns                                                                                        |                                                       |

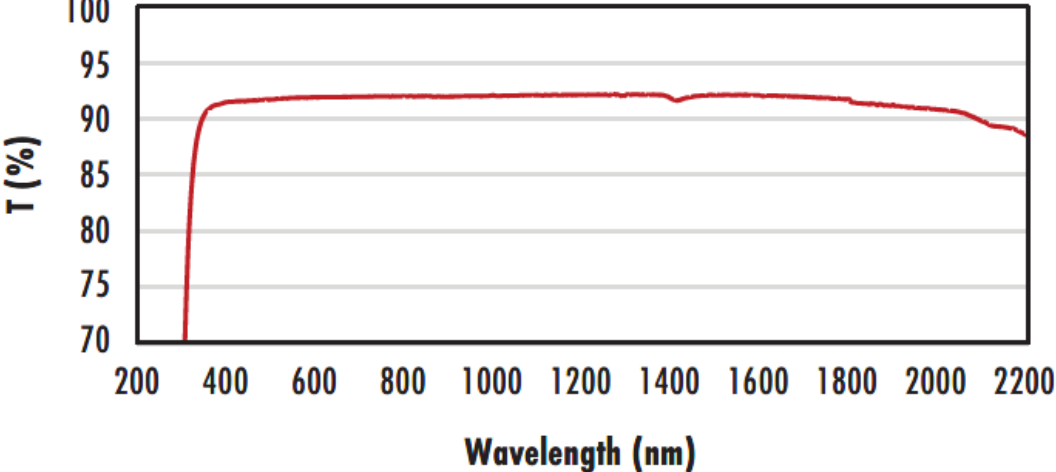
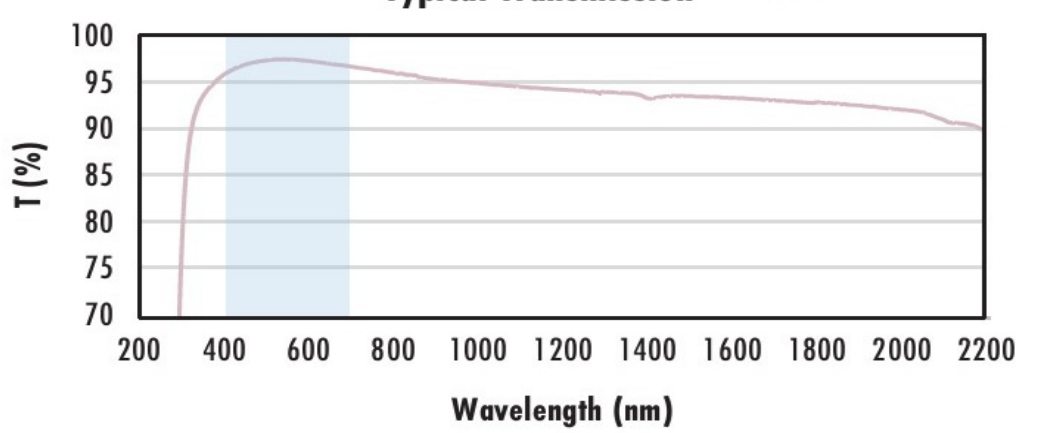
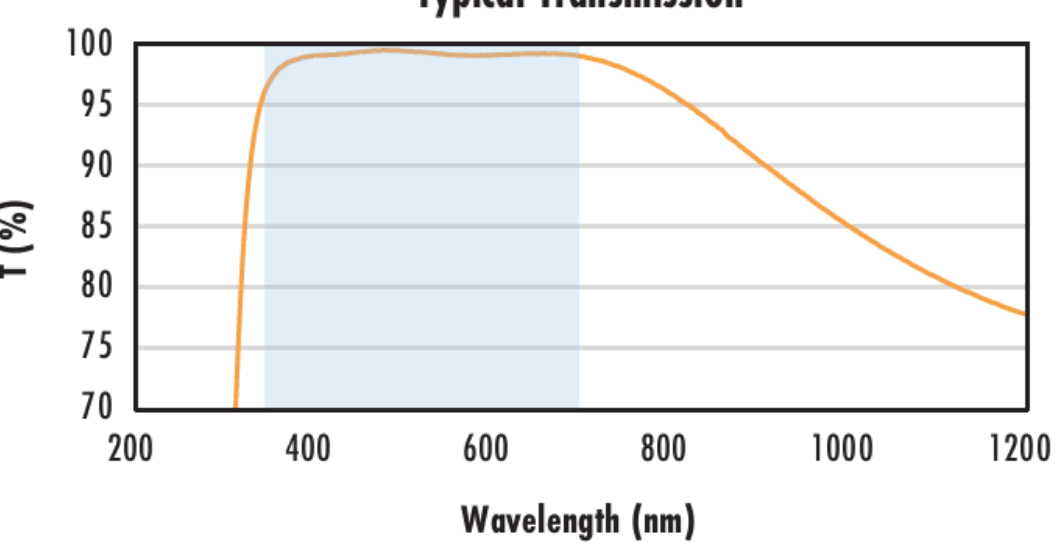
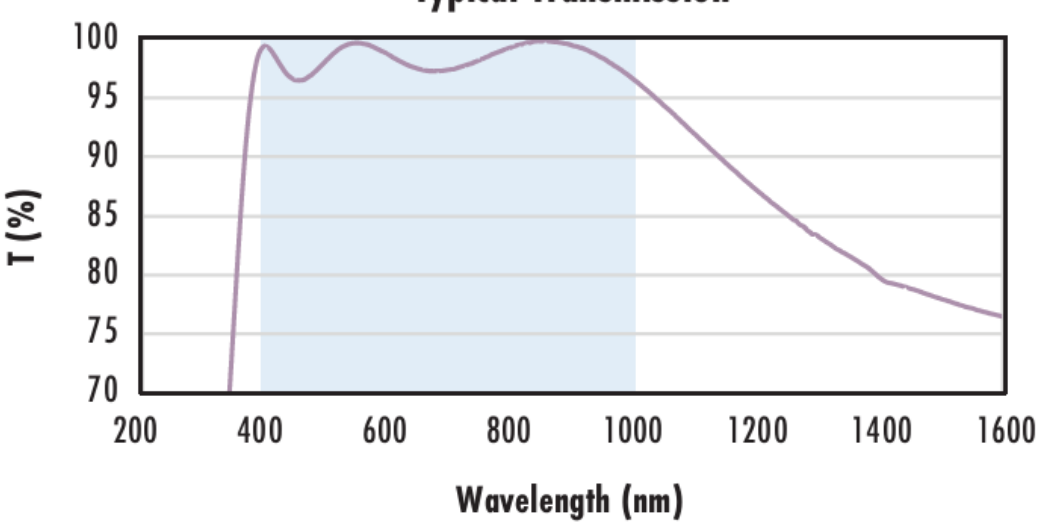
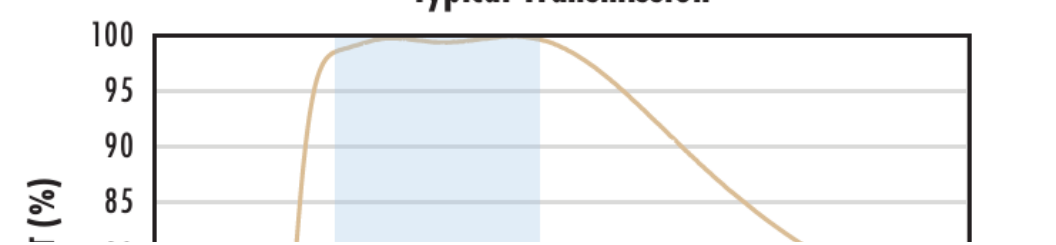
|                                     |                             |
|-------------------------------------|-----------------------------|
| Regulatory Compliance               |                             |
|                                     | RoHS 2015:                  |
| Compliant                           |                             |
|                                     | Certificate of Conformance: |
| View                                |                             |
|                                     | Reach 235:                  |
| Compliant                           |                             |
|                                     | Country of Origin:          |
| Japan                               |                             |
|                                     | Imported By:                |
| Edmund Optics India Private Limited |                             |

## 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

|                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| N-BK7                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <div data-bbox="262 216 1249 736"><h3>Uncoated N-BK7 Typical Transmission</h3></div>                       | <div data-bbox="1333 424 1837 513"><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="262 810 1249 1294"><h3>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</h3></div> | <div data-bbox="1333 899 1837 1151"><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 1329 1249 1917"><h3>N-BK7 with VIS-EXT Coating Typical Transmission</h3></div>       | <div data-bbox="1333 1492 1837 1745"><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 1973 1249 2540"><h3>N-BK7 with VIS-NIR Coating Typical Transmission</h3></div>       | <div data-bbox="1333 2086 1837 2407"><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 2591 1249 2899"><h3>N-BK7 with VIS 0° Coating Typical Transmission</h3></div>        | <div data-bbox="1333 2709 1837 2899"><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></div>                                                                                                                                                                                       |

|                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                           | <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\% @ 532\text{nm}</math><br/><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

Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).

## Compatible Mounts

