

[See all 164 Products in Family](#)

TECHSPEC<sup>®</sup> 15mm Dia. x 22.5mm FL YAG-BBAR Coated, Double-Convex Lens



YAG-BBAR Coated Double-Convex (DCX) Lenses



Stock #89-248 4 In Stock

☐ [Other Coating Options](#)

-

1

+

€51<sup>.00</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | €51,50 each                   |
| Qty 10-24      | €46,25 each                   |
| Qty 25-99      | €41,25 each                   |
| Need More?     | <a href="#">Request Quote</a> |

Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Type:

Double-Convex Lens

Physical & Mechanical Properties

|                                                                                                              |                                                       |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 15.00 +0.0/-0.025                                                                                            | Diameter (mm):                                        |
| <1                                                                                                           | Centering (arcmin):                                   |
| Protective as needed                                                                                         | Bevel:                                                |
| 4.20                                                                                                         | Center Thickness CT (mm):                             |
| ±0.10                                                                                                        | Center Thickness Tolerance (mm):                      |
| 2.54                                                                                                         | Edge Thickness ET (mm):                               |
| 14.00                                                                                                        | Clear Aperture CA (mm):                               |
| Optical Properties                                                                                           |                                                       |
| 21.29                                                                                                        | Back Focal Length BFL (mm):                           |
| 22.50                                                                                                        | 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-SF11                                                                                                       | Substrate: <input type="checkbox"/>                   |
| 40-20                                                                                                        | Surface Quality:                                      |
| 1.5λ                                                                                                         | Power (P-V) @ 632.8nm:                                |
| λ/4                                                                                                          | Irregularity (P-V) @ 632.8nm:                         |
| 34.36                                                                                                        | Radius R <sub>1</sub> =R <sub>2</sub> (mm):           |
| 1.5                                                                                                          | f/#:                                                  |
| 587.6                                                                                                        | Focal Length Specification Wavelength (nm):           |
| ±1                                                                                                           | Focal Length Tolerance (%):                           |
| 0.33                                                                                                         | Numerical Aperture NA:                                |
| 400 - 2500                                                                                                   | Wavelength Range (nm):                                |
| 5 J/cm² @ 532nm, 10ns                                                                                        | Damage Threshold, By Design: <input type="checkbox"/> |
| Regulatory Compliance                                                                                        |                                                       |
| Compliant                                                                                                    | RoHS 2015:                                            |
| View                                                                                                         | Certificate of Conformance:                           |
| Compliant                                                                                                    | Reach 235:                                            |

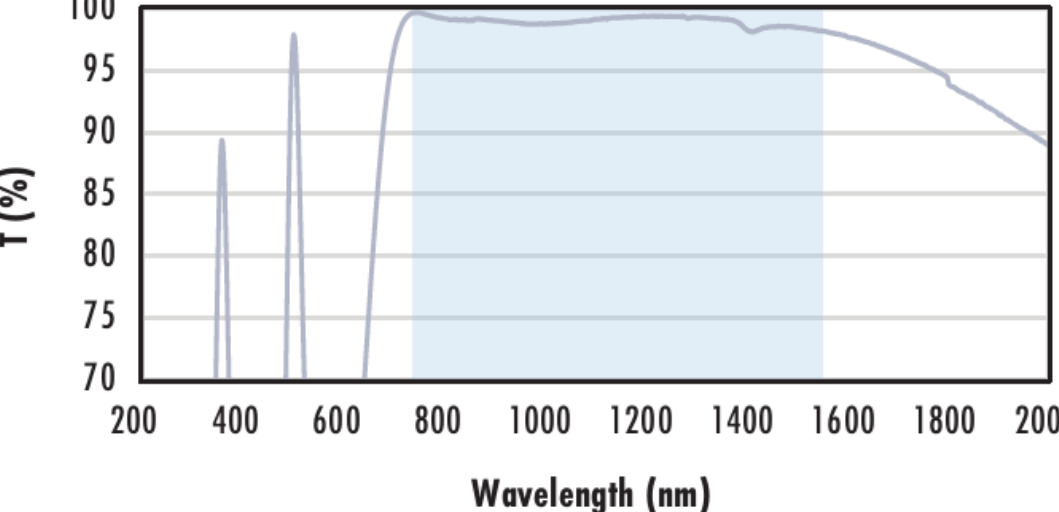
## Product Details

- Optimized for R<0.25% @532nm and 1064nm
- 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

|                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Uncoated N-BK7 Typical Transmission</b></p>                       | <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>                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</b></p>  | <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\% @ 400 - 700\text{nm}</math> (N-BK7)</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 VIS-EXT Coating Typical Transmission</b></p>         | <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\% @ 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>                                                                                                                  |
| <p><b>N-BK7 with VIS-NIR Coating Typical Transmission</b></p>         | <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\% @ 880\text{nm}</math><br/><math>R_{avg} \leq 1.25\% @ 400 - 870\text{nm}</math><br/><math>R_{avg} \leq 1.25\% @ 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> |
| <p><b>N-BK7 with VIS 0° Coating 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\% @ 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>                                                                                                                   |

|                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p data-bbox="569 255 1037 350"><b>N-BK7 with YAG-BBAR Coating</b><br/><b>Typical Transmission</b></p>    | <p data-bbox="1341 385 1839 433">Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.</p> <p data-bbox="1331 448 1850 495">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1472 510 1709 584"><p><math>R_{abs} \leq 0.25\% \text{ @ } 532\text{nm}</math></p><p><math>R_{abs} \leq 0.25\% \text{ @ } 1064\text{nm}</math></p><p><math>R_{avg} \leq 1.0\% \text{ @ } 500 - 1100\text{nm}</math></p></div> <p data-bbox="1341 596 1839 644">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 658 1709 682"><a href="#">Click Here to Download Data</a></p>                     |
| <p data-bbox="617 881 1008 976"><b>N-BK7 with NIR I Coating</b><br/><b>Typical Transmission</b></p>      | <p data-bbox="1341 1047 1839 1095">Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.</p> <p data-bbox="1331 1110 1850 1157">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1472 1172 1709 1196"><p><math>R_{avg} \leq 0.5\% \text{ @ } 600 - 1050\text{nm}</math></p></div> <p data-bbox="1341 1207 1839 1255">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 1270 1709 1294"><a href="#">Click Here to Download Data</a></p>                                                                                                                                           |
| <p data-bbox="606 1525 1016 1620"><b>N-BK7 with NIR II Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1341 1653 1839 1700">Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.</p> <p data-bbox="1331 1715 1850 1762">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1472 1777 1709 1852"><p><math>R_{abs} \leq 1.5\% \text{ @ } 750 - 800\text{nm}</math></p><p><math>R_{abs} \leq 1.0\% \text{ @ } 800 - 1550\text{nm}</math></p><p><math>R_{avg} \leq 0.7\% \text{ @ } 750 - 1550\text{nm}</math></p></div> <p data-bbox="1341 1887 1839 1935">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 1949 1709 1973"><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