

TECHSPEC<sup>®</sup> 10mm Dia. x 20mm FL, YAG-BBAR Coated, Double-Convex Lens



YAG-BBAR Coated Double-Convex (DCX) Lenses



Stock **#89-233** **5 In Stock**

☐ [Other Coating Options](#)

-

1

+

£39<sup>20</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | £39.20 each                   |
| Qty 10-24      | £35.20 each                   |
| Qty 25-99      | £31.40 each                   |
| Need More?     | <a href="#">Request Quote</a> |

ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

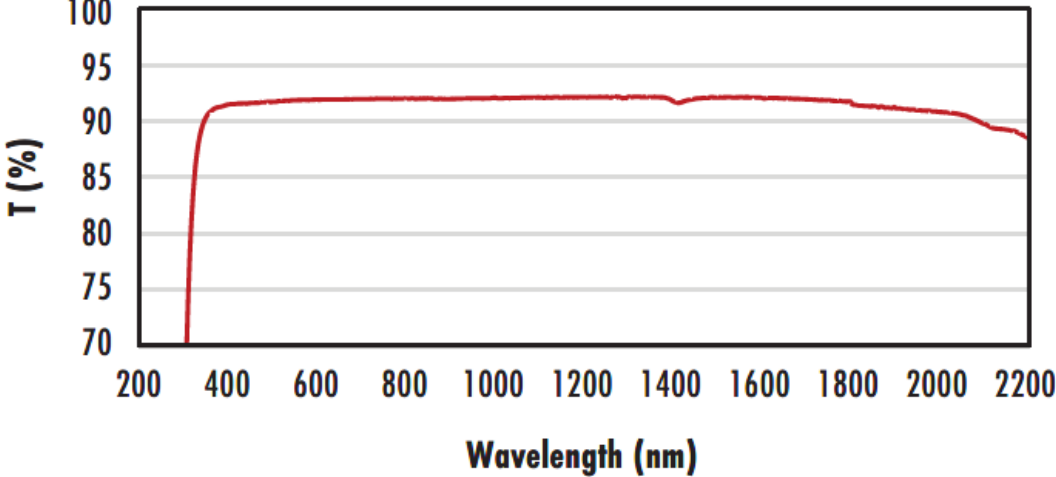
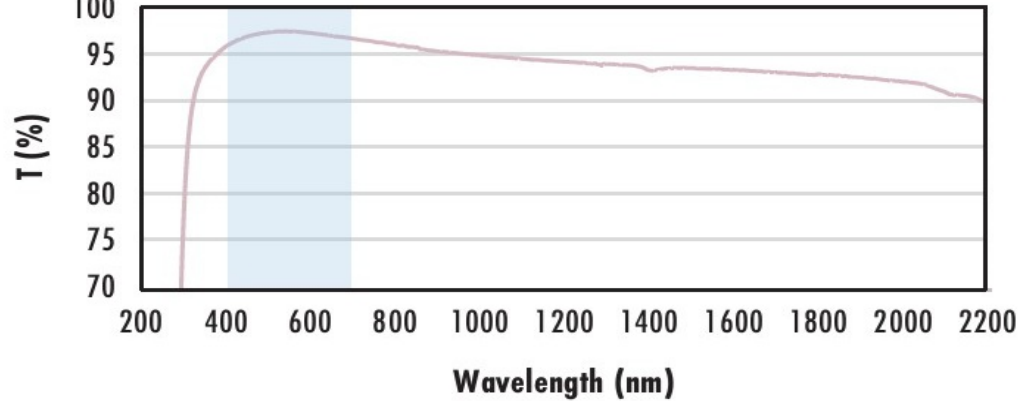
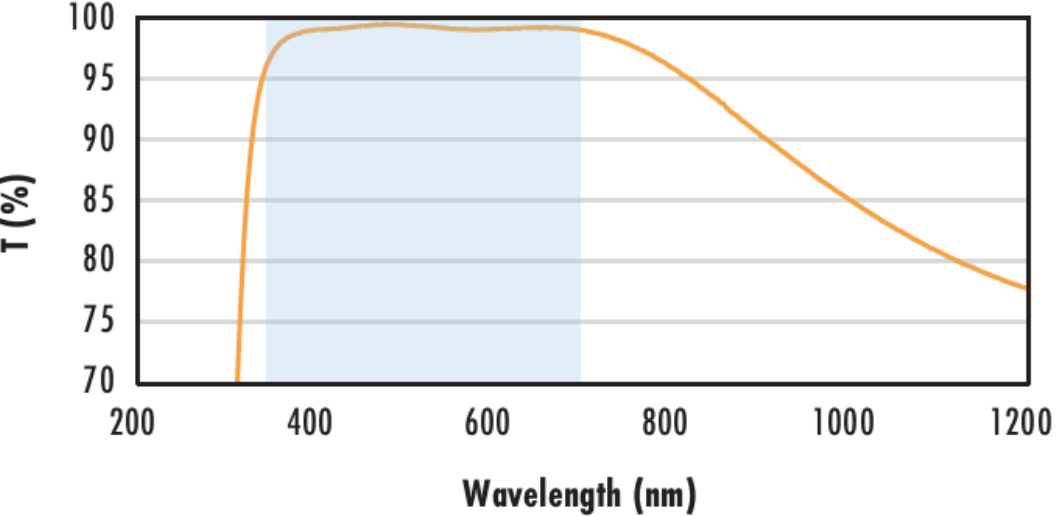
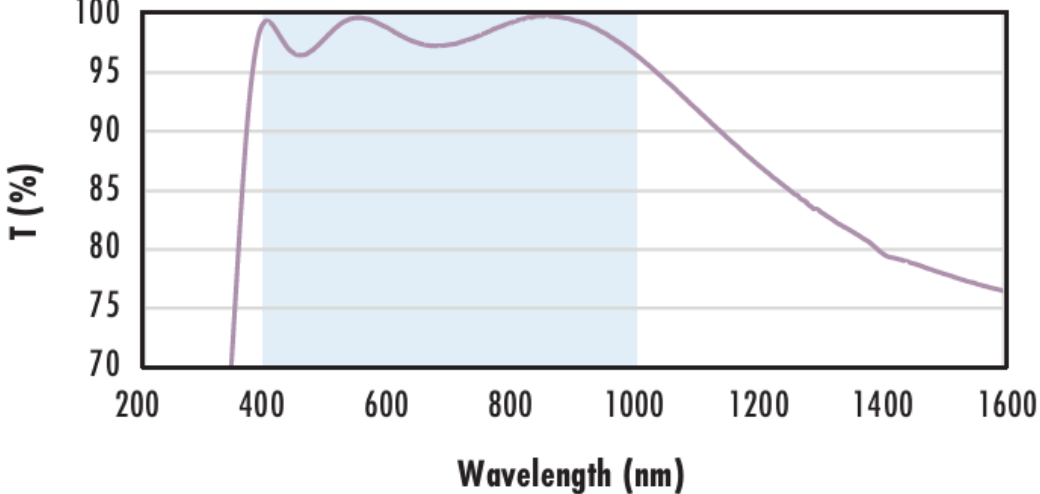
SPECIFICATIONS

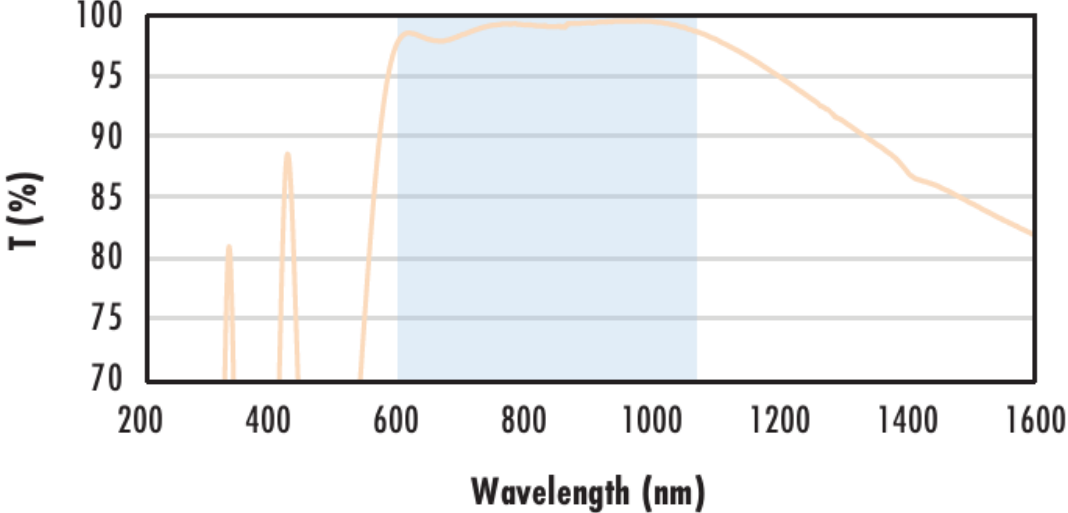
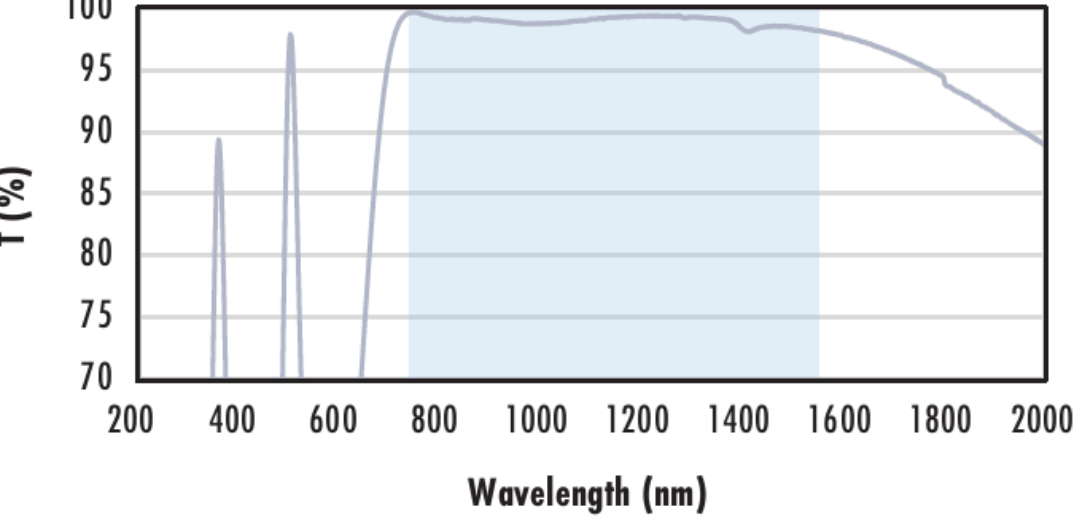
| General                                                                                                      |                                                       |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Double-Convex Lens                                                                                           | Type:                                                 |
| Physical & Mechanical Properties                                                                             |                                                       |
| 10.00 +0.0/-0.025                                                                                            | Diameter (mm):                                        |
| <1                                                                                                           | Centering (arcmin):                                   |
| Protective as needed                                                                                         | Bevel:                                                |
| 2.50                                                                                                         | Center Thickness CT (mm):                             |
| ±0.05                                                                                                        | Center Thickness Tolerance (mm):                      |
| 1.25                                                                                                         | Edge Thickness ET (mm):                               |
| 9.00                                                                                                         | Clear Aperture CA (mm):                               |
| Optical Properties                                                                                           |                                                       |
| 19.16                                                                                                        | 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: <input type="checkbox"/>                   |
| 40-20                                                                                                        | Surface Quality:                                      |
| 1.5λ                                                                                                         | Power (P-V) @ 632.8nm:                                |
| λ/4                                                                                                          | Irregularity (P-V) @ 632.8nm:                         |
| 20.24                                                                                                        | Radius R <sub>1</sub> =R <sub>2</sub> (mm):           |
| 2.00                                                                                                         | f/#:                                                  |
| 587.6                                                                                                        | Focal Length Specification Wavelength (nm):           |
| ±1                                                                                                           | Focal Length Tolerance (%):                           |
| 0.25                                                                                                         | 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.

|                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| N-BK7                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <div data-bbox="262 362 1249 884"><h3>Uncoated N-BK7 Typical Transmission</h3></div>                        | <div data-bbox="1339 566 1841 655"><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="262 958 1213 1436"><h3>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</h3></div> | <div data-bbox="1339 1047 1841 1299"><p>Typical transmission of a 3mm thick N-BK7 window with MgF<sub>2</sub> (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></div>                                                                                                 |
| <div data-bbox="262 1478 1249 2062"><h3>N-BK7 with VIS-EXT Coating Typical Transmission</h3></div>        | <div data-bbox="1339 1644 1841 1896"><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></div>                                                                                                                  |
| <div data-bbox="262 2119 1234 2686"><h3>N-BK7 with VIS-NIR Coating Typical Transmission</h3></div>        | <div data-bbox="1339 2237 1841 2555"><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></div> |
| <div data-bbox="346 2742 1171 2896"><h3>N-BK7 with VIS 0° Coating Typical Transmission</h3></div>         | <div data-bbox="1339 2873 1841 2896"><p>Typical transmission of a 3mm thick N-BK7 window with VIS 0°</p></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                              | <p>(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>                                                                                                                                                                       |
| <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\%</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>           |
| <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\%</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>                                                                                                       |
| <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\%</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> |

## 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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