

TECHSPEC<sup>®</sup> 12mm Dia. x 48mm FL YAG-BBAR Coated, Inked, Double-Convex Lens



YAG-BBAR Coated Double-Convex (DCX) Lenses



Stock **#89-244-INK** [CONTACT US](#)

-

1

+

£49<sup>00</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | £49.60 each                   |
| Qty 10-24      | £44.80 each                   |
| Qty 25-99      | £39.80 each                   |
| Need More?     | <a href="#">Request Quote</a> |

**i** Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Type:

Double-Convex Lens

Physical & Mechanical Properties

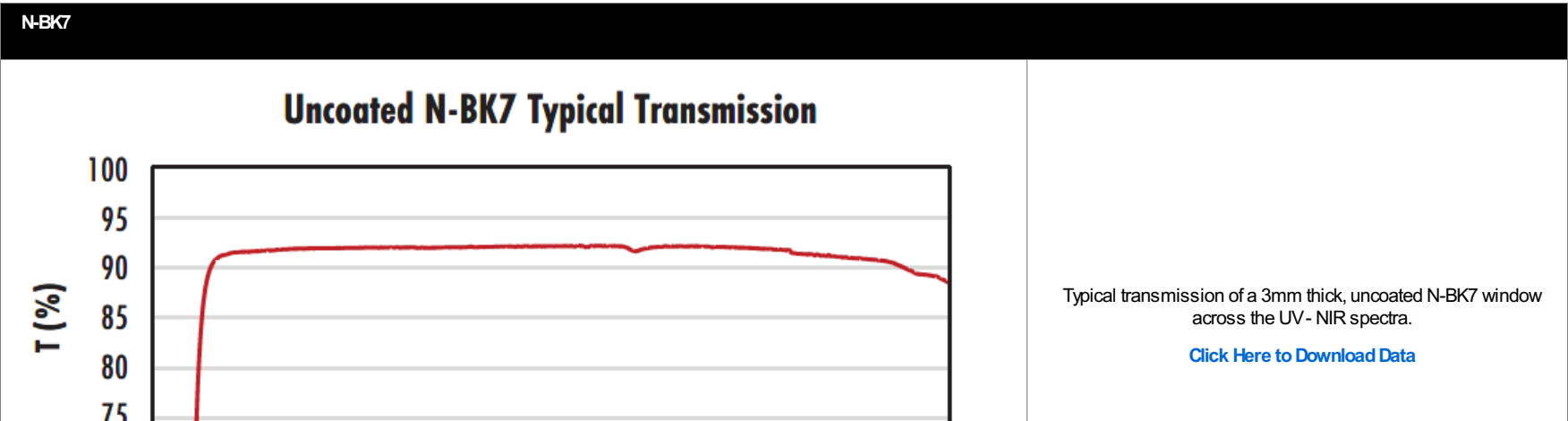
|                                                                                                              |                                             |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| 12.00 ±0.025                                                                                                 | Diameter (mm):                              |
| <1                                                                                                           | Centering (arcmin):                         |
| Protective as needed                                                                                         | Bevel:                                      |
| 2.74                                                                                                         | Center Thickness CT (mm):                   |
| ±0.05                                                                                                        | Center Thickness Tolerance (mm):            |
| 2.00                                                                                                         | Edge Thickness ET (mm):                     |
| 11.00                                                                                                        | Clear Aperture CA (mm):                     |
| Optical Properties                                                                                           |                                             |
| 47.09                                                                                                        | Back Focal Length BFL (mm):                 |
| 48.00                                                                                                        | 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:                            |
| 49.14                                                                                                        | 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:                 |

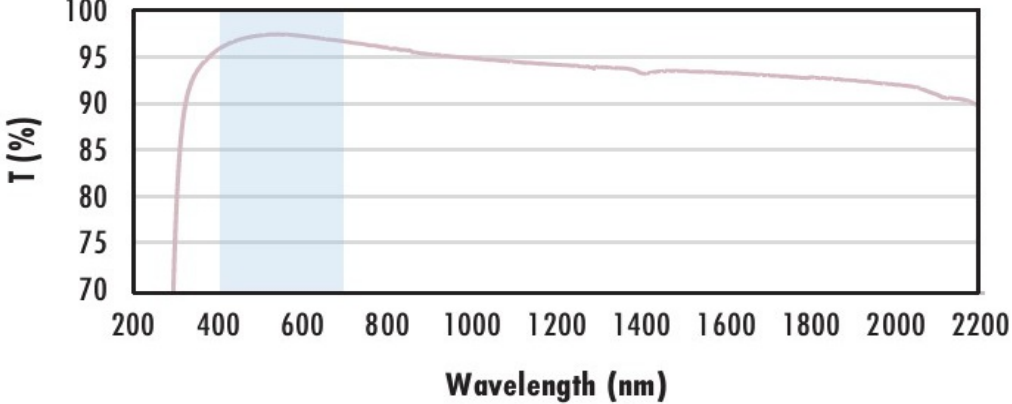
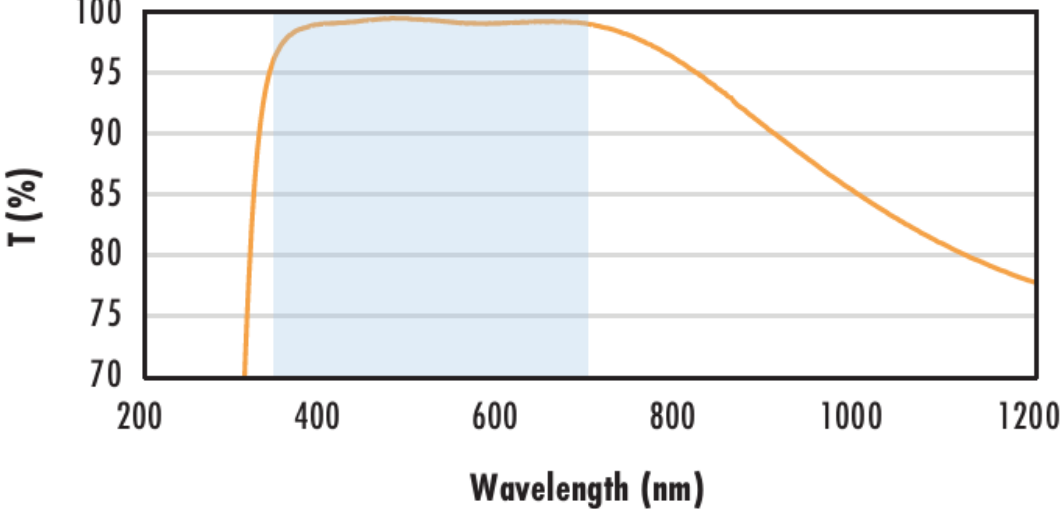
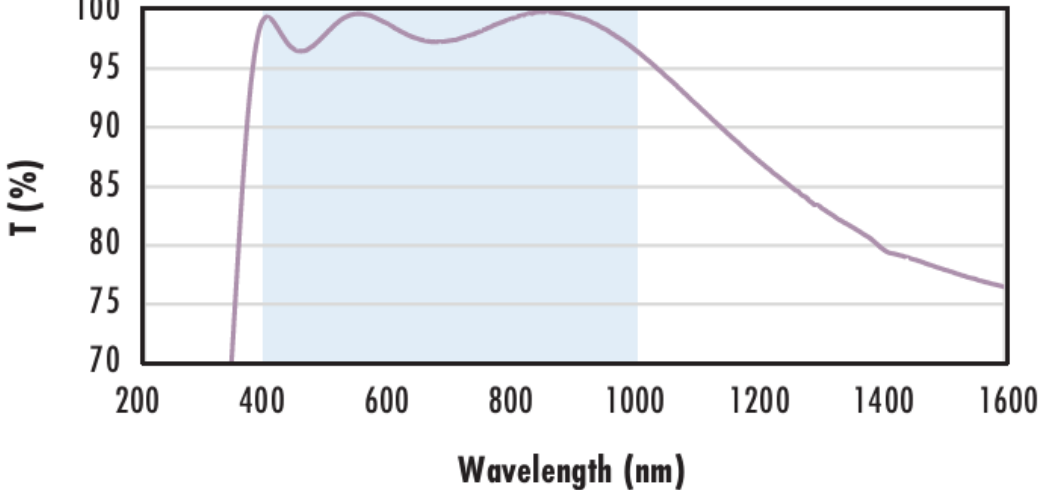
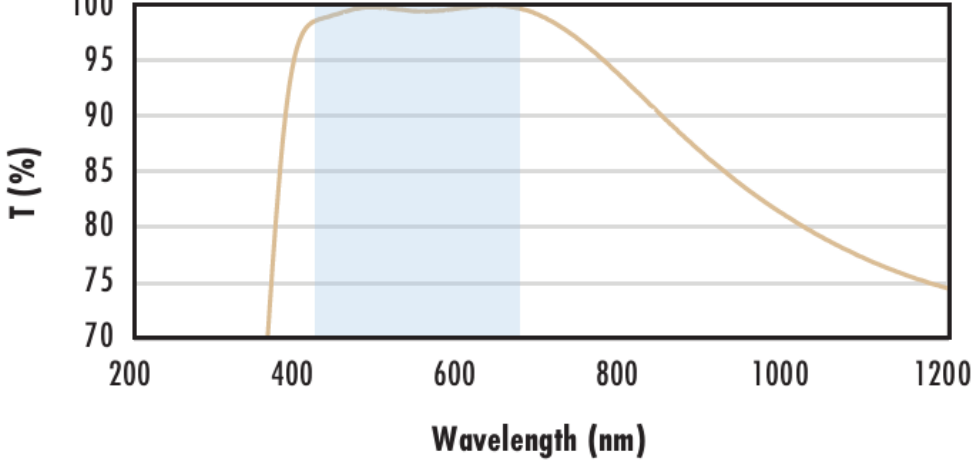
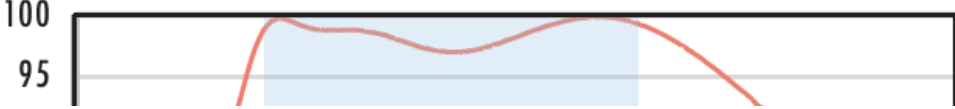
## Product Details

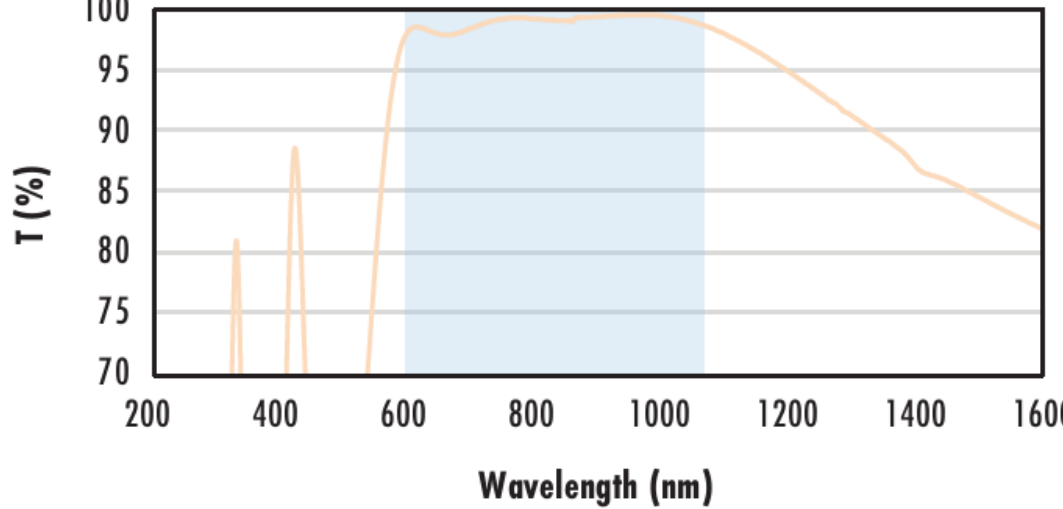
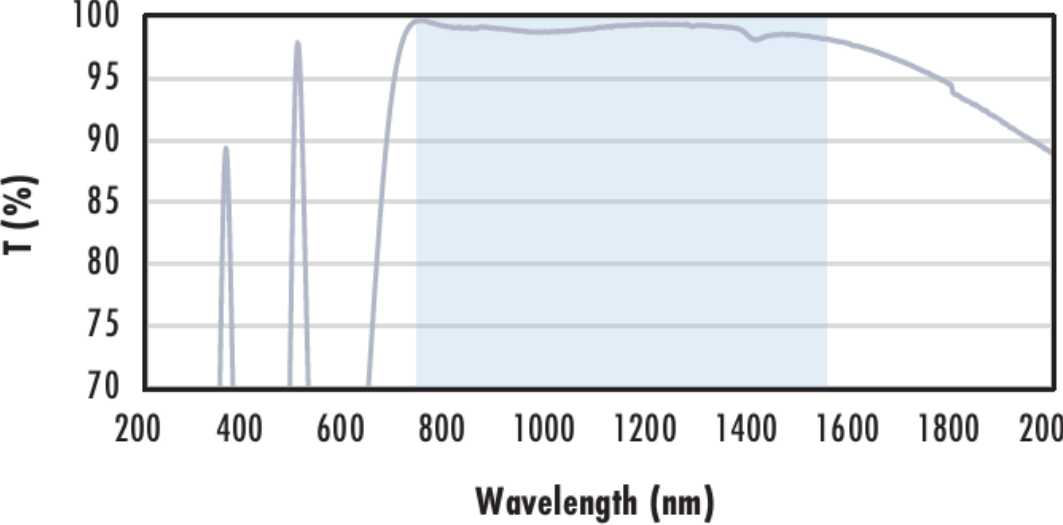
- Optimized for R<0.25% @ 532nm and 1064nm
- Minimize Aberrations Including Spherical and Coma
- UV Fused Silica DCX Lenses Available
- Other Coating Options Available: Uncoated, MgF<sub>2</sub>, VIS 0°, NIR I, NIR II, VIS-EXT, and VIS-NIR

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



|                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p data-bbox="585 320 953 403"><b>N-BK7 with MgF<sub>2</sub> Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1339 409 1843 457">Typical transmission of a 3mm thick N-BK7 window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.</p> <p data-bbox="1339 471 1850 519">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1436 534 1745 557"><math>R_{avg} \leq 1.75\% @ 400 - 700\text{nm}</math> (N-BK7)</p> <p data-bbox="1339 572 1839 620">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 635 1709 658"><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                                 |
| <p data-bbox="590 834 1014 928"><b>N-BK7 with VIS-EXT Coating</b><br/><b>Typical Transmission</b></p>        | <p data-bbox="1331 1003 1854 1050">Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.</p> <p data-bbox="1331 1065 1850 1113">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1478 1127 1703 1151"><math>R_{avg} \leq 0.5\% @ 350 - 700\text{nm}</math></p> <p data-bbox="1339 1166 1839 1213">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 1228 1709 1252"><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                                        |
| <p data-bbox="585 1475 1008 1570"><b>N-BK7 with VIS-NIR Coating</b><br/><b>Typical Transmission</b></p>     | <p data-bbox="1331 1590 1854 1638">Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.</p> <p data-bbox="1331 1653 1850 1700">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1495 1715 1686 1739"><math>R_{abs} \leq 0.25\% @ 880\text{nm}</math></p> <p data-bbox="1474 1745 1709 1768"><math>R_{avg} \leq 1.25\% @ 400 - 870\text{nm}</math></p> <p data-bbox="1474 1774 1709 1798"><math>R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}</math></p> <p data-bbox="1339 1825 1839 1872">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 1887 1709 1911"><a href="#">Click Here to Download Data</a></p> |
| <p data-bbox="594 2095 976 2190"><b>N-BK7 with VIS 0° Coating</b><br/><b>Typical Transmission</b></p>       | <p data-bbox="1339 2228 1843 2276">Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.</p> <p data-bbox="1331 2291 1850 2338">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1478 2353 1703 2377"><math>R_{avg} \leq 0.4\% @ 425 - 675\text{nm}</math></p> <p data-bbox="1339 2392 1839 2439">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1474 2454 1709 2478"><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                                         |
| <p data-bbox="569 2689 1037 2783"><b>N-BK7 with YAG-BBAR Coating</b><br/><b>Typical Transmission</b></p>    | <p data-bbox="1339 2822 1843 2870">Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.</p> <p data-bbox="1331 2884 1850 2899">The blue shaded region indicates the coating design wavelength</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