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TECHSPEC<sup>®</sup> 20mm Dia. x 50mm FL, YAG-BBAR Coated, Inked, Double-Convex Lens



YAG-BBAR Coated Double-Convex (DCX) Lenses



Stock **#89-261-INK** [CONTACT US](#)

-

1

+

€65<sup>.00</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | €65,00 each                   |
| Qty 10-24      | €58,50 each                   |
| Qty 25-99      | €52,00 each                   |
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**ⓘ** Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Type:

Double-Convex Lens

Physical & Mechanical Properties

|                                                                                                              |                                             |
|--------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| 20.00 ±0.025                                                                                                 | Diameter (mm):                              |
| <1                                                                                                           | Centering (arcmin):                         |
| Protective as needed                                                                                         | Bevel:                                      |
| 3.50                                                                                                         | Center Thickness CT (mm):                   |
| ±0.10                                                                                                        | Center Thickness Tolerance (mm):            |
| 1.52                                                                                                         | Edge Thickness ET (mm):                     |
| 19.00                                                                                                        | Clear Aperture CA (mm):                     |
| Optical Properties                                                                                           |                                             |
| 48.84                                                                                                        | Back Focal Length BFL (mm):                 |
| 50.00                                                                                                        | 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: □                                |
| 40-20                                                                                                        | Surface Quality:                            |
| 51.08                                                                                                        | Radius R <sub>1</sub> =R <sub>2</sub> (mm): |
| 2.5                                                                                                          | f/#:                                        |
| 587.6                                                                                                        | Focal Length Specification Wavelength (nm): |
| ±1                                                                                                           | Focal Length Tolerance (%):                 |
| 0.20                                                                                                         | Numerical Aperture NA:                      |
| 350 - 2200                                                                                                   | Wavelength Range (nm):                      |
| Regulatory Compliance                                                                                        |                                             |
| View                                                                                                         | Certificate of Conformance:                 |

## 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](#).

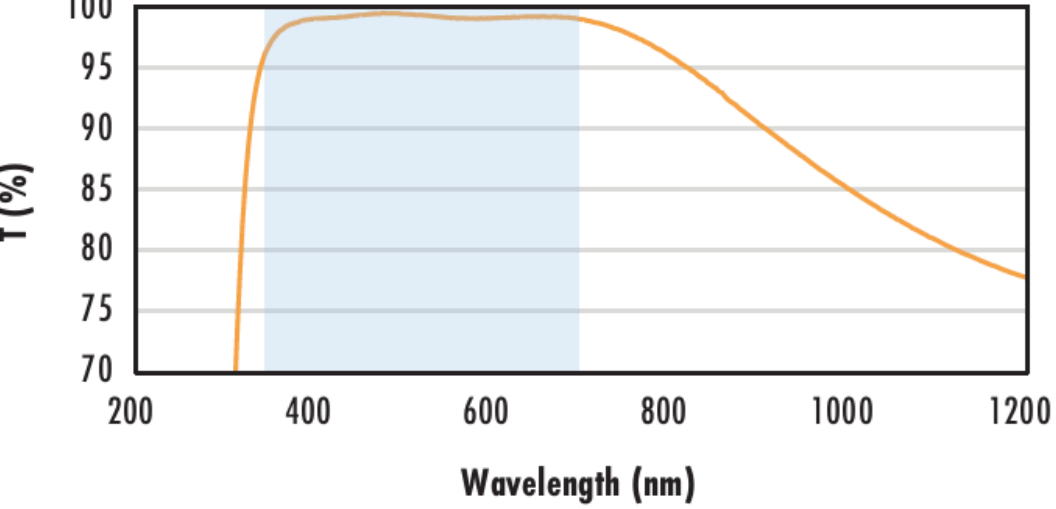
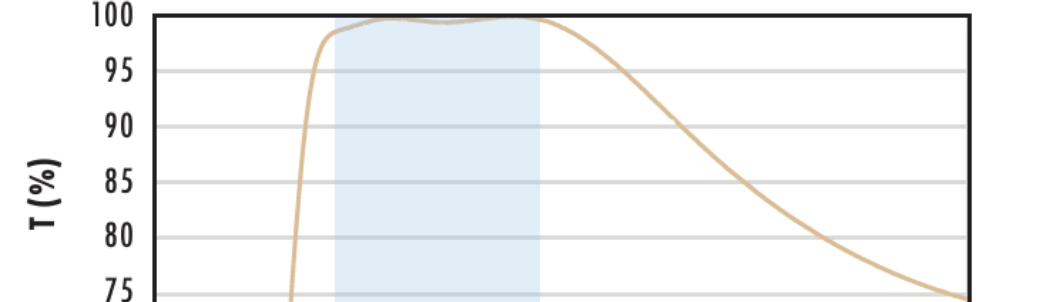
## Product Details

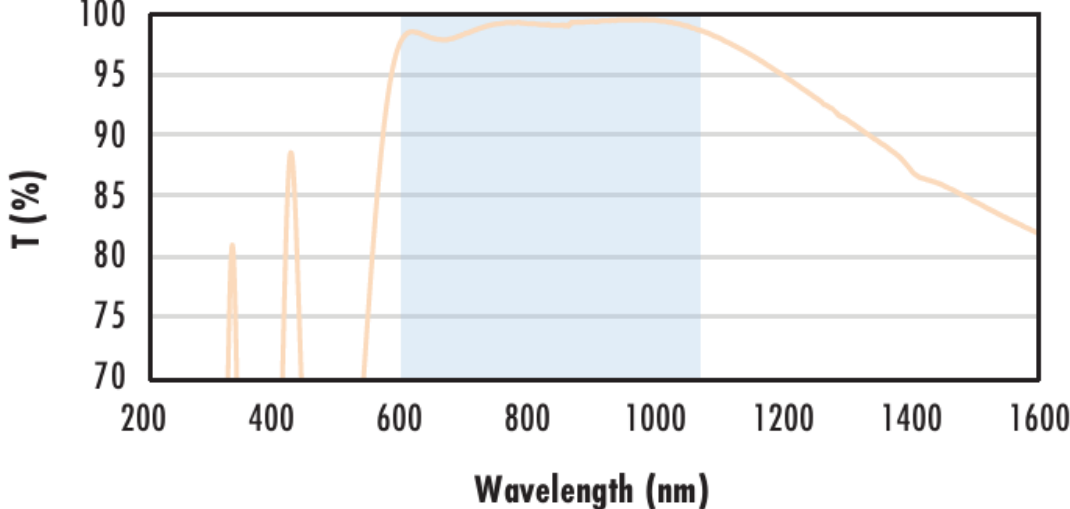
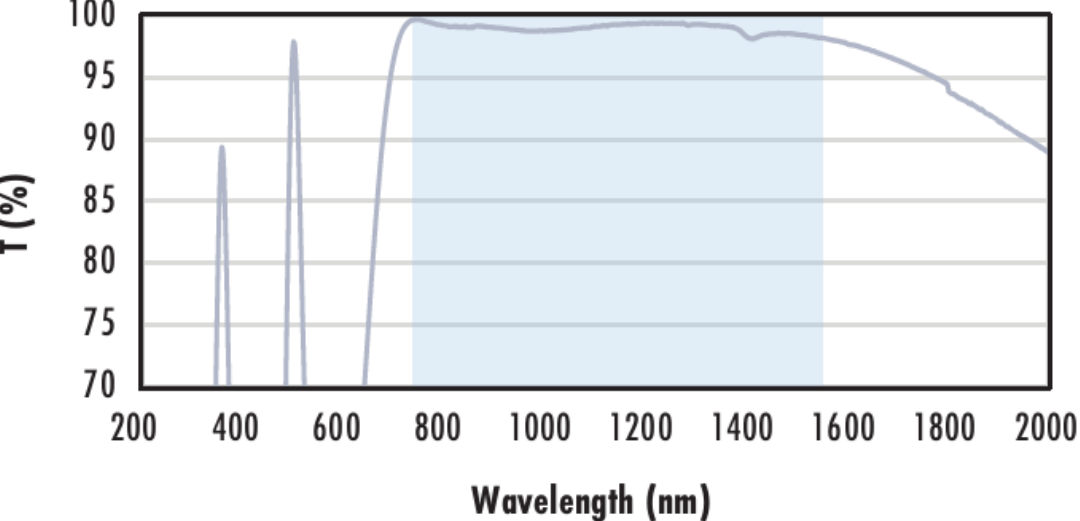
- Optimized for R<0.25% @ 532nm and 1064nm
- Minimize Aberrations Including Spherical and Coma
- [UV Fused Silica DCX Lenses](#) Available
- Other Coating Options Available: [Uncoated](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [NIR I](#), [NIR II](#), [VIS-EXT](#), and [VIS-NIR](#)

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

N-BK7

|                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div data-bbox="262 118 1249 638"><h3>Uncoated N-BK7 Typical Transmission</h3></div>                       | <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 data-bbox="262 712 1249 1202"><h3>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</h3></div> | <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 data-bbox="262 1261 1249 1825"><h3>N-BK7 with VIS-EXT Coating Typical Transmission</h3></div>       | <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 data-bbox="262 1902 1249 2448"><h3>N-BK7 with VIS-NIR Coating Typical Transmission</h3></div>       | <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 data-bbox="262 2510 1249 2878"><h3>N-BK7 with VIS 0° Coating Typical Transmission</h3></div>        | <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="569 270 1037 365"><b>N-BK7 with YAG-BBAR Coating</b><br/><b>Typical Transmission</b></p>    | <p data-bbox="1339 397 1839 448">Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.</p> <p data-bbox="1339 463 1850 513">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1472 525 1713 599"><p><math>R_{abs} \leq 0.25\%</math> @ 532nm</p><p><math>R_{abs} \leq 0.25\%</math> @ 1064nm</p><p><math>R_{avg} \leq 1.0\%</math> @ 500 - 1100nm</p></div> <p data-bbox="1339 611 1839 661">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 673 1709 694"><a href="#">Click Here to Download Data</a></p>                     |
| <p data-bbox="617 899 1008 994"><b>N-BK7 with NIR I Coating</b><br/><b>Typical Transmission</b></p>     | <p data-bbox="1339 1059 1839 1110">Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.</p> <p data-bbox="1339 1124 1850 1175">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1472 1187 1713 1210"><p><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</p></div> <p data-bbox="1339 1222 1839 1273">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 1285 1709 1305"><a href="#">Click Here to Download Data</a></p>                                                                                                           |
| <p data-bbox="606 1543 1016 1638"><b>N-BK7 with NIR II Coating</b><br/><b>Typical Transmission</b></p>  | <p data-bbox="1339 1668 1839 1718">Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.</p> <p data-bbox="1339 1733 1850 1783">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <div data-bbox="1472 1795 1713 1869"><p><math>R_{abs} \leq 1.5\%</math> @ 750 - 800nm</p><p><math>R_{abs} \leq 1.0\%</math> @ 800 - 1550nm</p><p><math>R_{avg} \leq 0.7\%</math> @ 750 - 1550nm</p></div> <p data-bbox="1339 1902 1839 1952">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 1964 1709 1985"><a href="#">Click Here to Download Data</a></p> |

Compatible Mounts