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TECHSPEC<sup>®</sup> 20mm Dia. x 80mm FL, YAG-BBAR Coated, Double-Convex Lens



YAG-BBAR Coated Double-Convex (DCX) Lenses



Stock **#89-263** 2 In Stock

☐ Other Coating Options

-

1

+

A\$87<sup>20</sup>

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| Volume Pricing |                               |
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| Qty 1-9        | A\$87.20 each                 |
| Qty 10-24      | A\$78.40 each                 |
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General

Type:

Double-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

|                                             |                                                                                                              |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 20.00 +0.0/-0.025                           |                                                                                                              |
| Centering (arcmin):                         | <1                                                                                                           |
| Bevel:                                      | Protective as needed                                                                                         |
| Center Thickness CT (mm):                   | 4.00                                                                                                         |
| Center Thickness Tolerance (mm):            | ±0.10                                                                                                        |
| Edge Thickness ET (mm):                     | 2.78                                                                                                         |
| Clear Aperture CA (mm):                     | 19.00                                                                                                        |
| Optical Properties                          |                                                                                                              |
| Back Focal Length BFL (mm):                 | 78.67                                                                                                        |
| Effective Focal Length EFL (mm):            | 80.00                                                                                                        |
| 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: <div></div>                      | 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): | 82.00                                                                                                        |
| f#:                                         | 4.00                                                                                                         |
| Focal Length Specification Wavelength (nm): | 587.6                                                                                                        |
| Focal Length Tolerance (%):                 | ±1                                                                                                           |
| Numerical Aperture NA:                      | 0.13                                                                                                         |
| Wavelength Range (nm):                      | 350 - 2200                                                                                                   |
| Damage Threshold, By Design: <div></div>    | 5 J/cm <sup>2</sup> @ 532nm, 10ns                                                                            |

|                             |           |
|-----------------------------|-----------|
| Regulatory Compliance       |           |
| RoHS 2015:                  | Compliant |
| Certificate of Conformance: | View      |
| Reach 235:                  | Compliant |

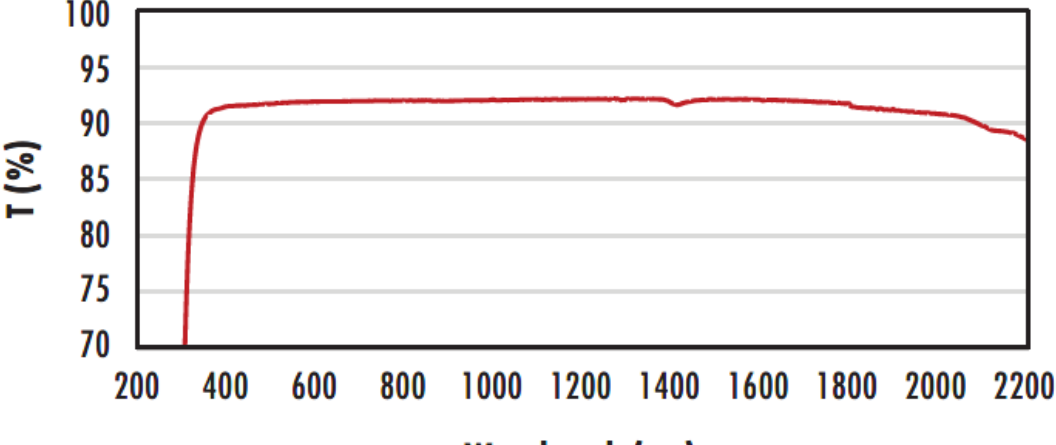
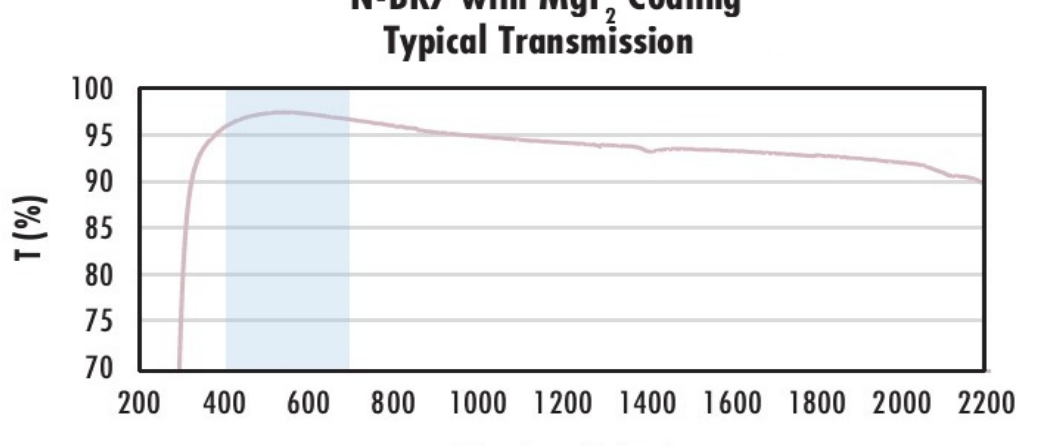
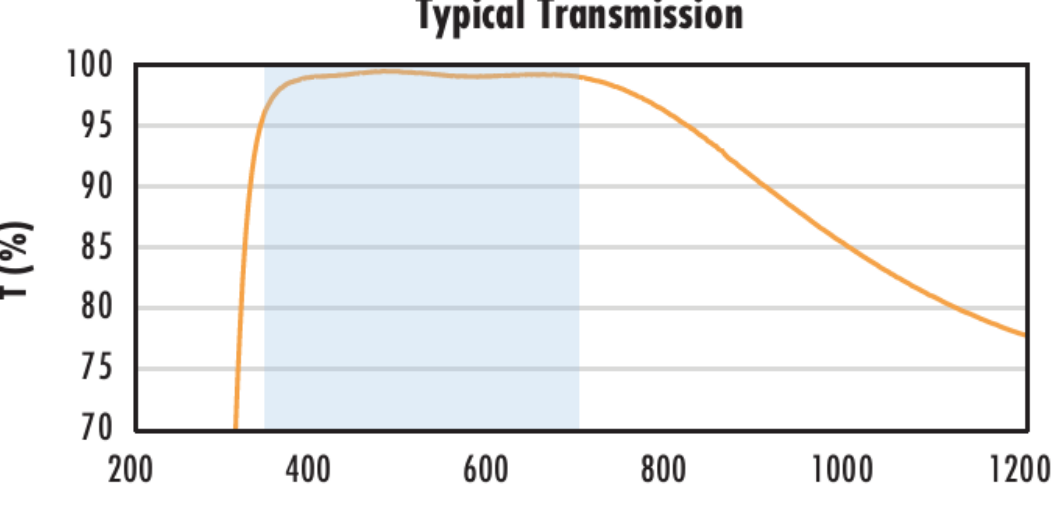
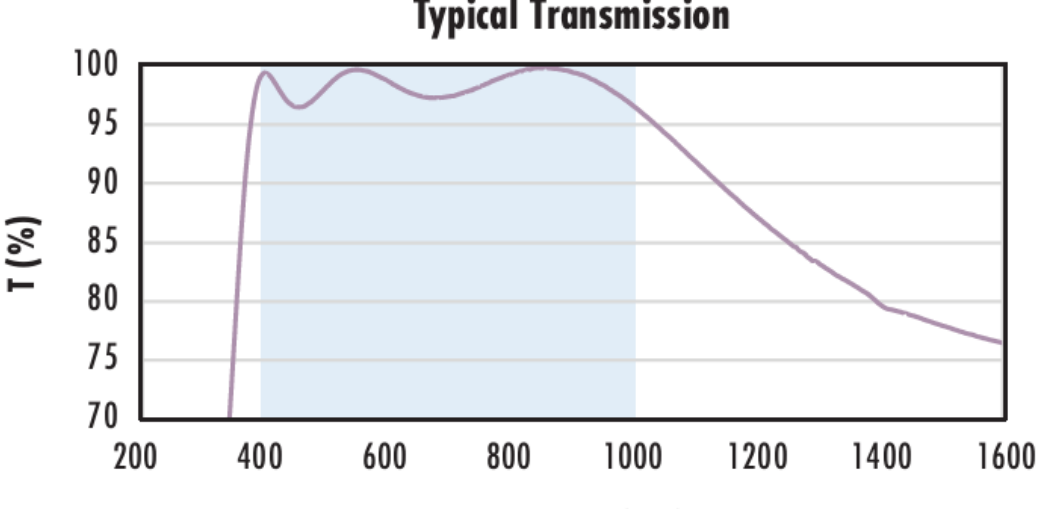
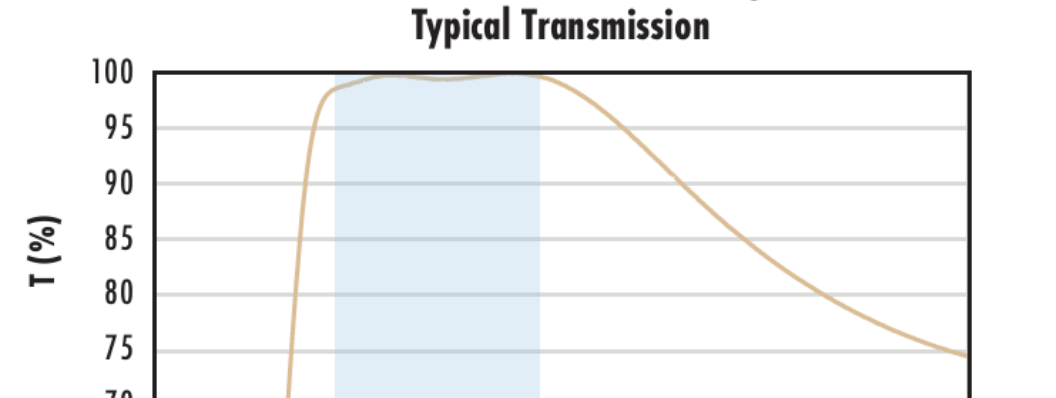
## Product Details

- 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 71 1249 593"><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="262 617 1249 1142"><h3>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</h3></div> | <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>                                                                                                            |
| <div data-bbox="262 1166 1249 1765"><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 1807 1249 2389"><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 2415 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>                                                                                                                   |

