

[See all 164 Products in Family](#)

TECHSPEC<sup>®</sup> 20mm Dia. x 30mm FL YAG-BBAR Coated, Double-Convex Lens



YAG-BBAR Coated Double-Convex (DCX) Lenses



Stock #89-259 2 In Stock

☐ Other Coating Options

-

1

+

£43<sup>60</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | £43.60 each                   |
| Qty 10-24      | £39.20 each                   |
| Qty 25-99      | £35.00 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

|                                                                                                              |                                                       |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 20.00 +0.0/-0.025                                                                                            | Diameter (mm):                                        |
| <1                                                                                                           | Centering (arcmin):                                   |
| Protective as needed                                                                                         | Bevel:                                                |
| 5.30                                                                                                         | Center Thickness CT (mm):                             |
| ±0.10                                                                                                        | Center Thickness Tolerance (mm):                      |
| 1.88                                                                                                         | Edge Thickness ET (mm):                               |
| 19.00                                                                                                        | Clear Aperture CA (mm):                               |
| Optical Properties                                                                                           |                                                       |
| 28.2                                                                                                         | Back Focal Length BFL (mm):                           |
| 30.00                                                                                                        | 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:                         |
| 30.08                                                                                                        | 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:                                |
| 350 - 2200                                                                                                   | 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:                                            |

## 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>Uncoated N-BK7 Typical Transmission</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>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</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>N-BK7 with VIS-EXT Coating Typical Transmission</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>N-BK7 with VIS-NIR Coating Typical Transmission</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> |



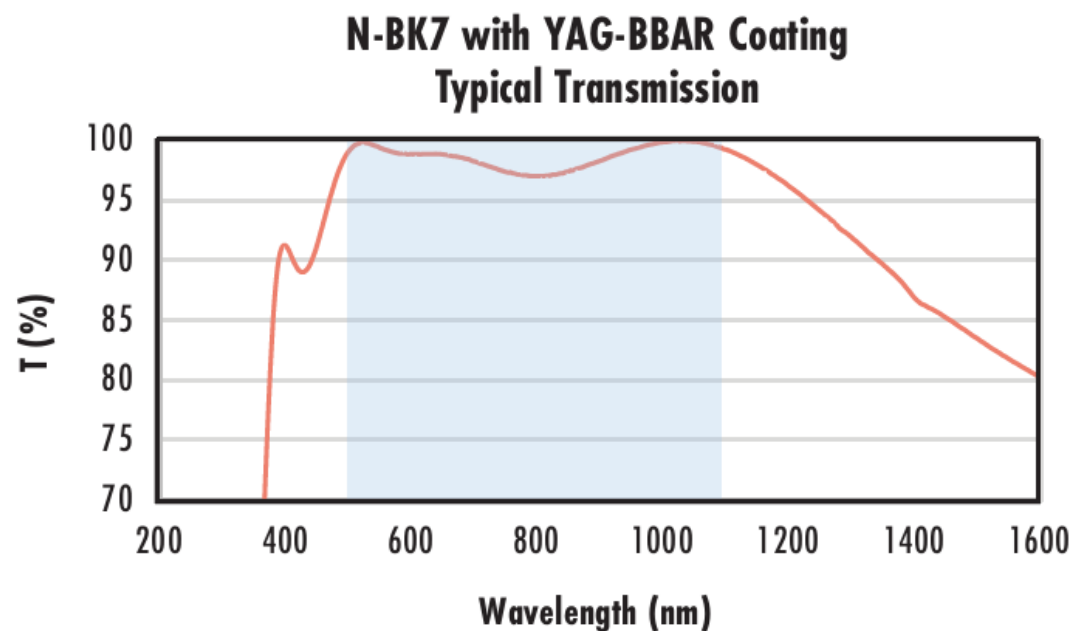
Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{\text{avg}} \leq 0.4\% \text{ @ } 425 - 675\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)



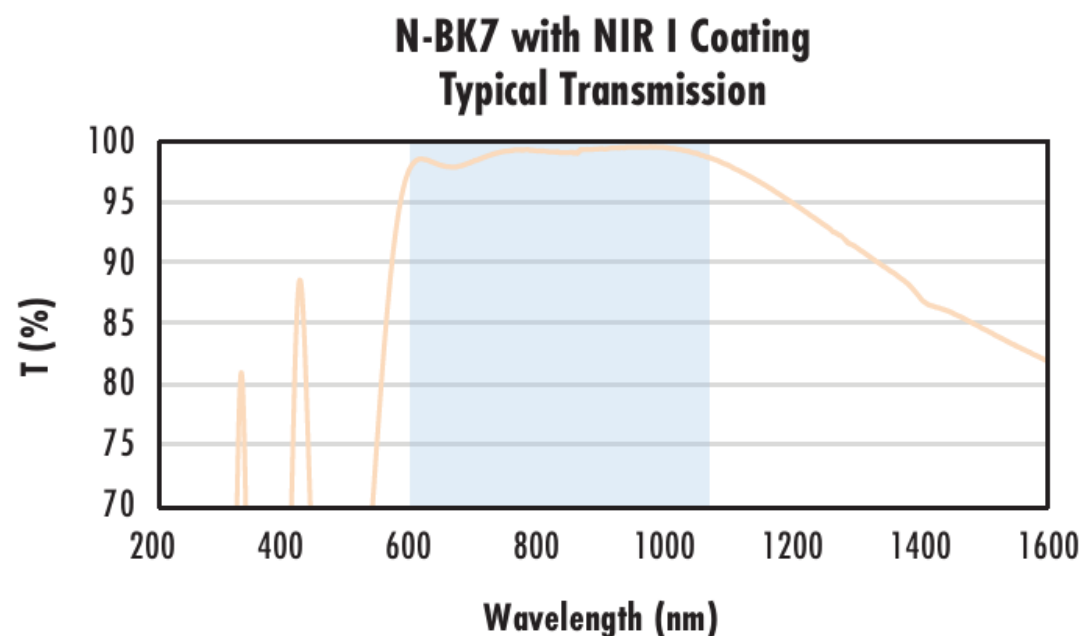
Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{\text{abs}} \leq 0.25\% \text{ @ } 532\text{nm}$$
$$R_{\text{abs}} \leq 0.25\% \text{ @ } 1064\text{nm}$$
$$R_{\text{avg}} \leq 1.0\% \text{ @ } 500 - 1100\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)



Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{\text{avg}} \leq 0.5\% \text{ @ } 600 - 1050\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)



Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{\text{abs}} \leq 1.5\% \text{ @ } 750 - 800\text{nm}$$
$$R_{\text{abs}} \leq 1.0\% \text{ @ } 800 - 1550\text{nm}$$
$$R_{\text{avg}} \leq 0.7\% \text{ @ } 750 - 1550\text{nm}$$

Data outside this range is not guaranteed and is for reference only.

[Click Here to Download Data](#)

## Compatible Mounts

