

**TECHSPEC® 20mm Dia. x 20mm FL, YAG-BBAR Coated, Double-Convex Lens**



YAG-BBAR Coated Double-Convex (DCX) Lenses



Stock **#89-257** **7 In Stock**

[Other Coating Options](#)

1  £43.<sup>00</sup>

**ADD TO CART**

Volume Pricing	
Qty 1-9	£43.60 each
Qty 10-24	£39.20 each
Qty 25-99	£35.00 each
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ⓘ Prices shown are exclusive of VAT/local taxes

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**SPECIFICATIONS**

## General

Double-Convex Lens **Type:**

## Physical & Mechanical Properties

20.00 +0.0/-0.025 **Diameter (mm):**

<1 **Centering (arcmin):**

Protective as needed **Bevel:**

5.00 **Center Thickness CT (mm):**

±0.10 **Center Thickness Tolerance (mm):**

1.6 **Edge Thickness ET (mm):**

19.00 **Clear Aperture CA (mm):**

## Optical Properties

18.55 **Back Focal Length BFL (mm):**

20.00 **Effective Focal Length EFL (mm):**

YAG-BBAR (500-1100nm) **Coating:**

**Coating Specification:**  
R<sub>abs</sub> <0.25% @ 532nm  
R<sub>abs</sub> <0.25% @ 1064nm  
R<sub>avg</sub> <1.0% @ 500 - 1100nm

**Substrate:**   
N-SF11

40-20 **Surface Quality:**

1.5λ **Power (P-V) @ 632.8nm:**

N4 **Irregularity (P-V) @ 632.8nm:**

30.25 **Radius R<sub>1</sub>=R<sub>2</sub> (mm):**

1.00 **f#:**

587.6 **Focal Length Specification Wavelength (nm):**

±1 **Focal Length Tolerance (%):**

0.50 **Numerical Aperture NA:**

400 - 2500 **Wavelength Range (nm):**

5 J/cm<sup>2</sup> @ 532nm, 10ns **Damage Threshold, By Design:**

## Regulatory Compliance

Compliant **RoHS 2015:**

View **Certificate of Conformance:**

Compliant **Reach 235:**

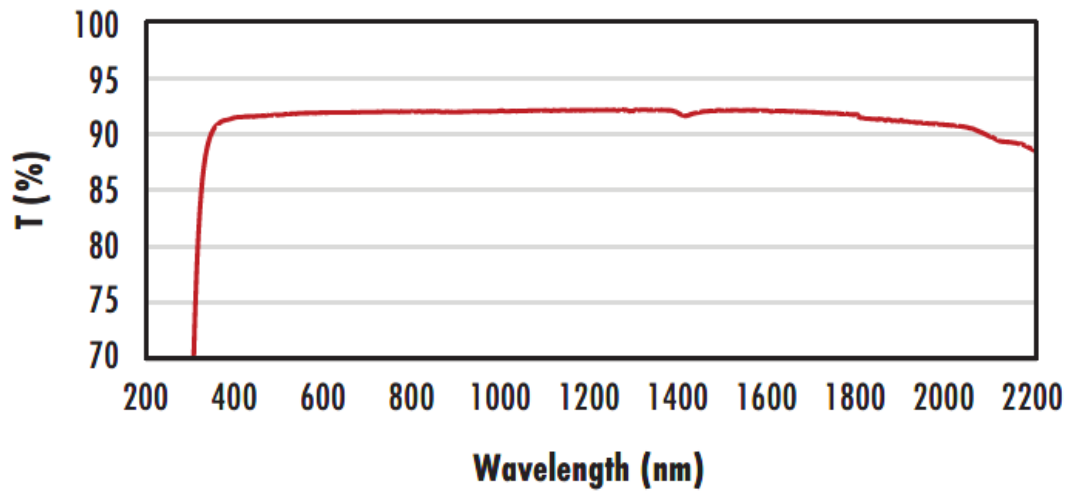
## PRODUCT DETAILS

- 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

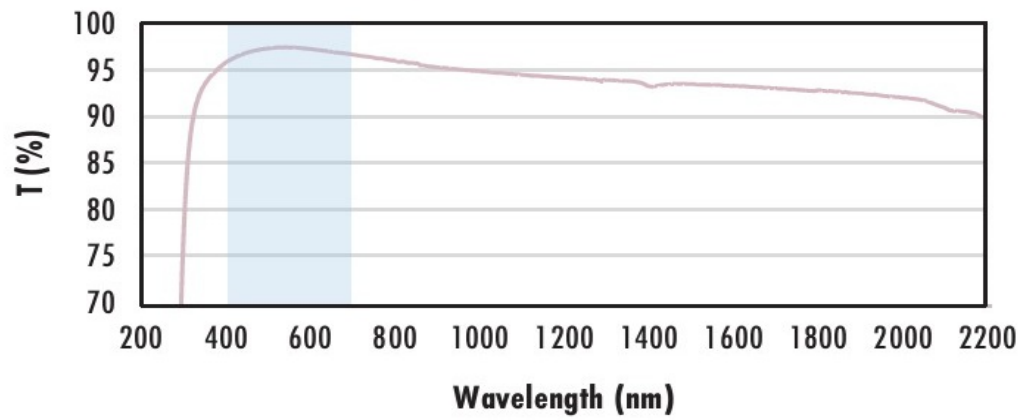
### Uncoated N-BK7 Typical Transmission



Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.

[Click Here to Download Data](#)

### N-BK7 with MgF<sub>2</sub> Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.

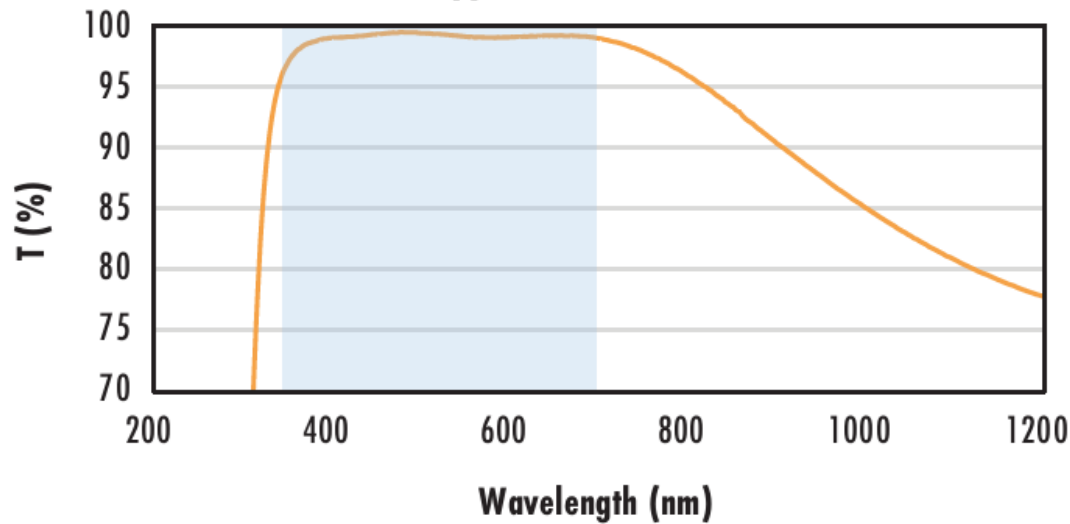
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{avg} \leq 1.75\% @ 400 - 700\text{nm (N-BK7)}$$

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

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### N-BK7 with VIS-EXT Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.

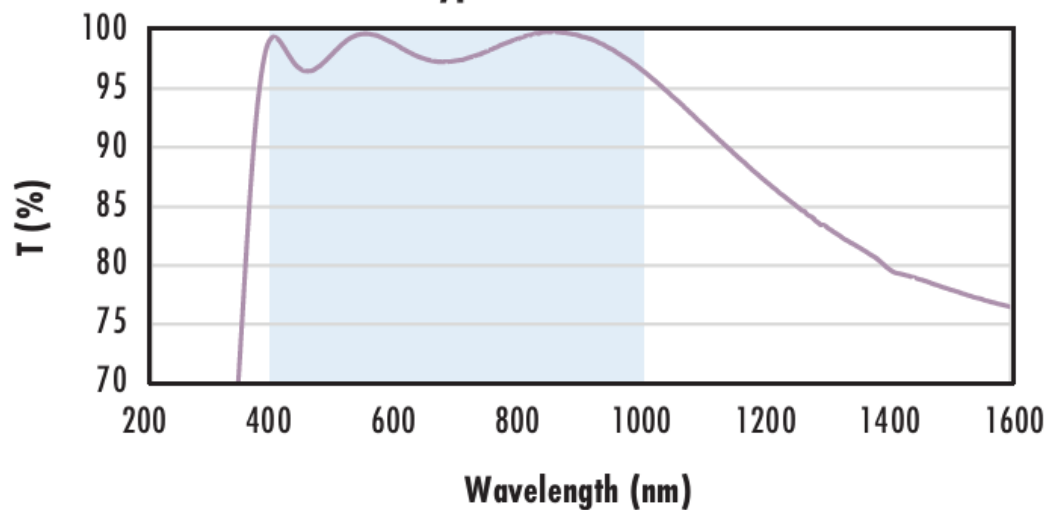
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$R_{avg} \leq 0.5\% @ 350 - 700\text{nm}$$

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

[Click Here to Download Data](#)

### N-BK7 with VIS-NIR Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.

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

$$R_{abs} \leq 0.25\% @ 880\text{nm}$$

$$R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$$

$$R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$$

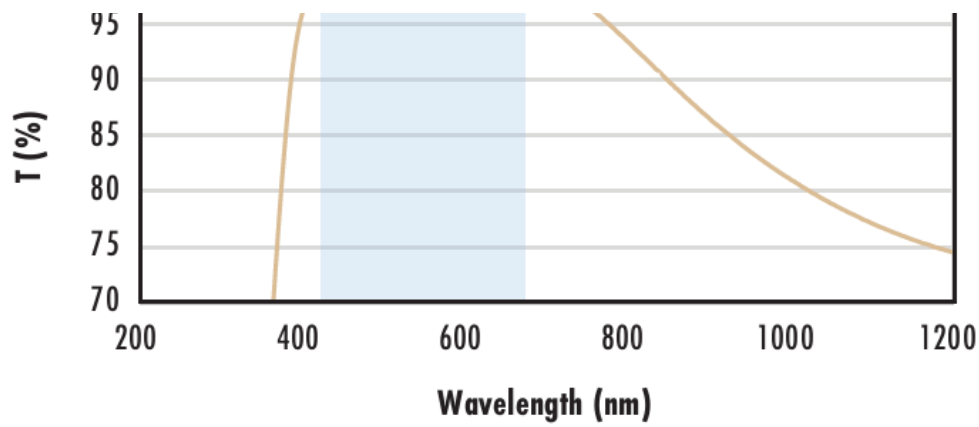
Data outside this range is not guaranteed and is for reference only.

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### N-BK7 with VIS 0° Coating Typical Transmission

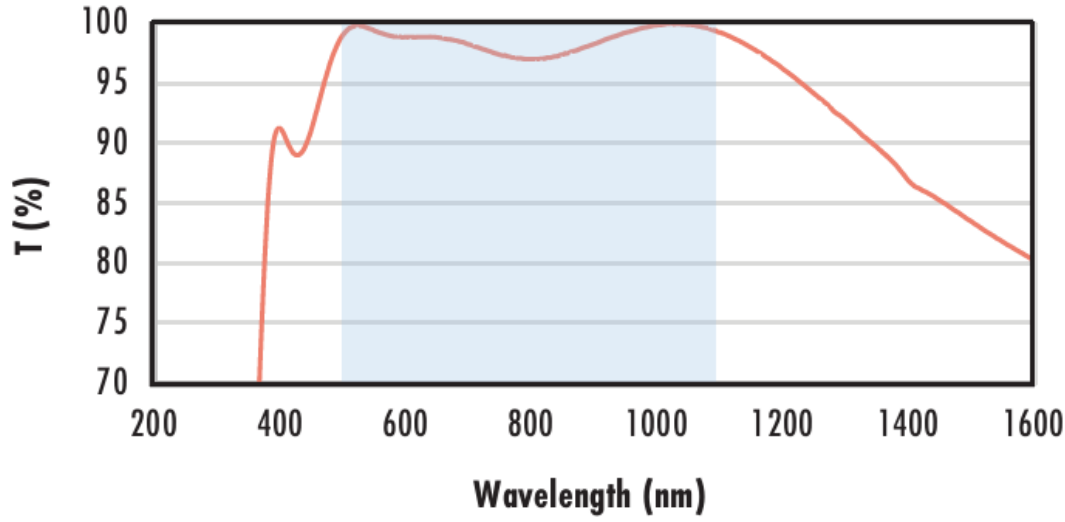


Typical transmission of a 3mm thick N-BK7 window with VIS 0°



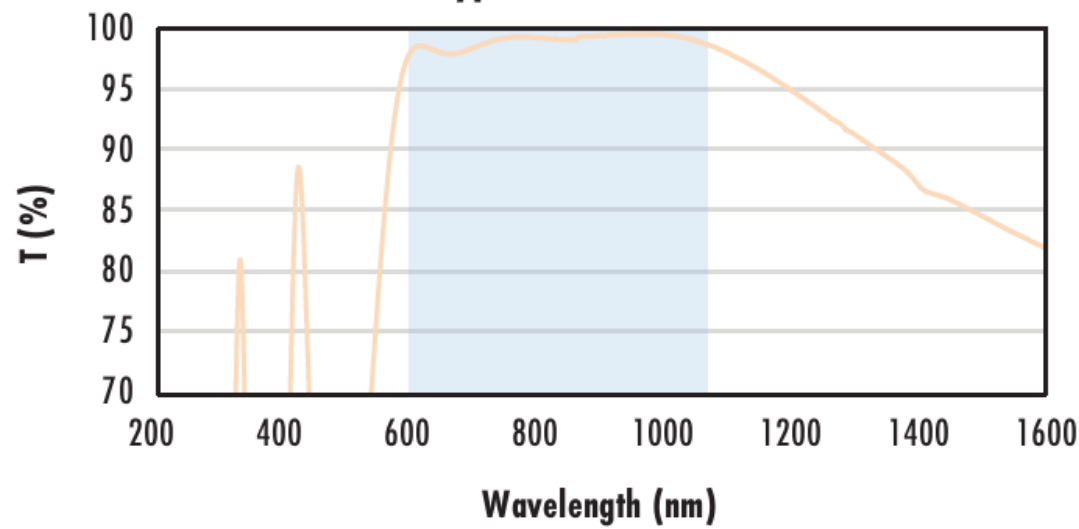
(425-675nm) coating at 0° AOI.  
 The blue shaded region indicates the coating design wavelength range, with the following specification:  
 $R_{avg} \leq 0.4\% @ 425 - 675\text{nm}$   
 Data outside this range is not guaranteed and is for reference only.  
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### N-BK7 with YAG-BBAR Coating Typical Transmission



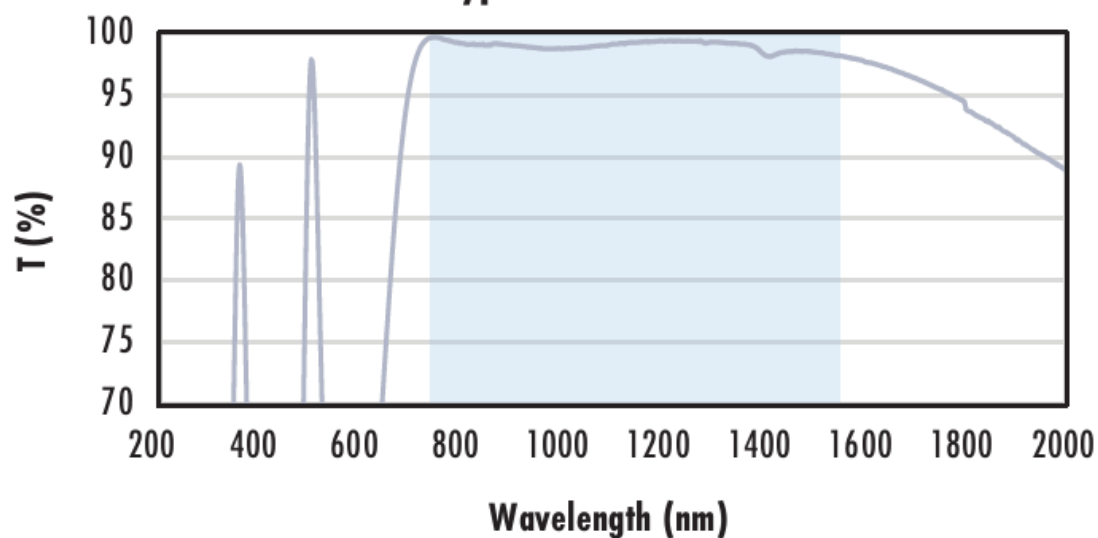
Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.  
 The blue shaded region indicates the coating design wavelength range, with the following specification:  
 $R_{abs} \leq 0.25\% @ 532\text{nm}$   
 $R_{abs} \leq 0.25\% @ 1064\text{nm}$   
 $R_{avg} \leq 1.0\% @ 500 - 1100\text{nm}$   
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)

### N-BK7 with NIR I Coating Typical Transmission



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:  
 $R_{avg} \leq 0.5\% @ 600 - 1050\text{nm}$   
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)

### N-BK7 with NIR II Coating Typical Transmission



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:  
 $R_{abs} \leq 1.5\% @ 750 - 800\text{nm}$   
 $R_{abs} \leq 1.0\% @ 800 - 1550\text{nm}$   
 $R_{avg} \leq 0.7\% @ 750 - 1550\text{nm}$   
 Data outside this range is not guaranteed and is for reference only.  
[Click Here to Download Data](#)

## 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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