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TECHSPEC® 5mm Dia. x 20mm FL, YAG-BBAR Coated, Double-Convex Lens



YAG-BBAR Coated Double-Convex (DCX) Lenses



Stock #89-214 [CONTACT US](#)

[Other Coating Options](#)

⊖ 1 ⊕ C\$83³⁰

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Volume Pricing	
Qty 1-9	C\$83.30 each
Qty 10-24	C\$74.90 each
Qty 25-99	C\$66.50 each
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Product Downloads

General

Type:

Double-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

5.00 +0.0/-0.025

Centering (arcmin):
<1

Bevel:
Protective as needed

Center Thickness CT (mm):
1.50

Center Thickness Tolerance (mm):
±0.05

Edge Thickness ET (mm):
1.19

Clear Aperture CA (mm):
4.5

Optical Properties

Back Focal Length BFL (mm):
19.5

Effective Focal Length EFL (mm):
20.00

Coating:
YAG-BBAR (500-1100nm)

Coating Specification:
R_{abs} <0.25% @ 532nm
R_{abs} <0.25% @ 1064nm
R_{avg} <1.0% @ 500 - 1100nm

Substrate:
N-BK7

Surface Quality:
40-20

Power (P-V) @ 632.8nm:
1.5λ

Irregularity (P-V) @ 632.8nm:
λ/4

Radius R₁=R₂ (mm):
20.41

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:
5 J/cm² @ 532nm, 10ns

Regulatory Compliance

RoHS 2015:
Compliant

Certificate of Conformance:
[View](#)

Reach 235:
Compliant

Need different specs or modifications?

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:

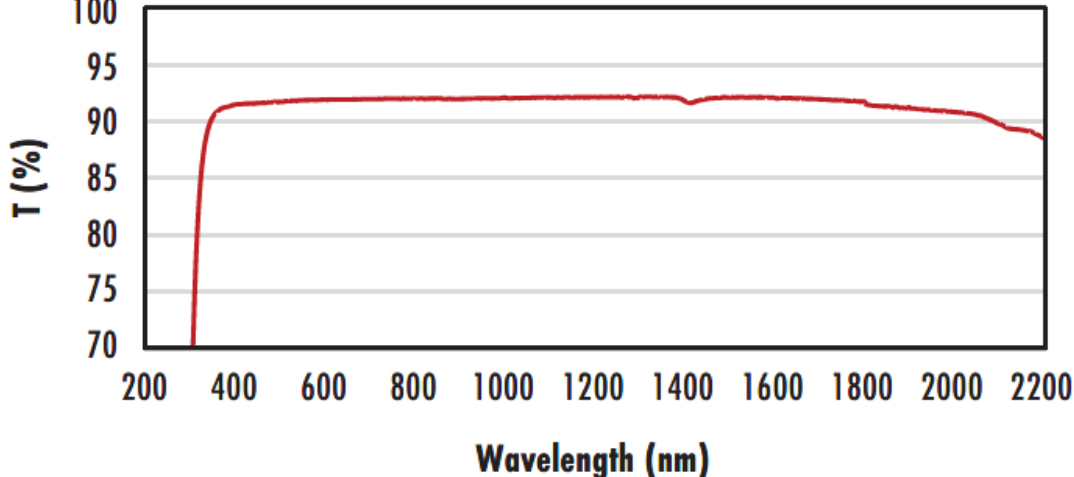
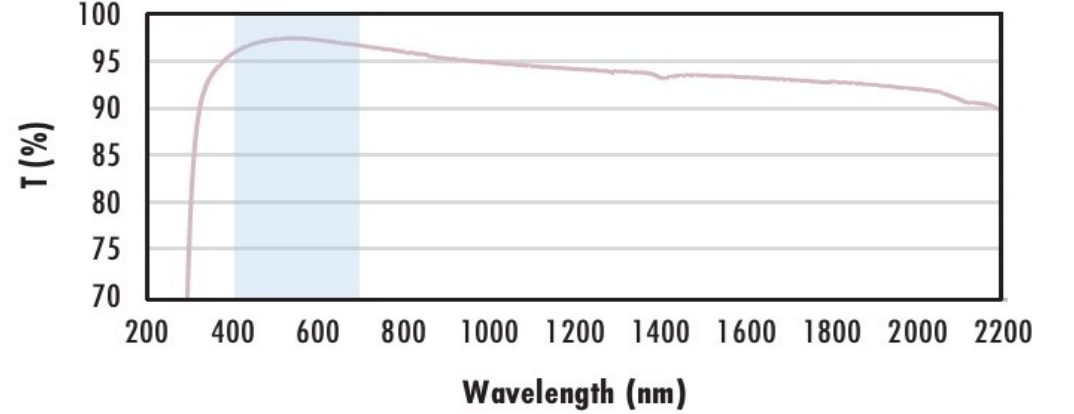
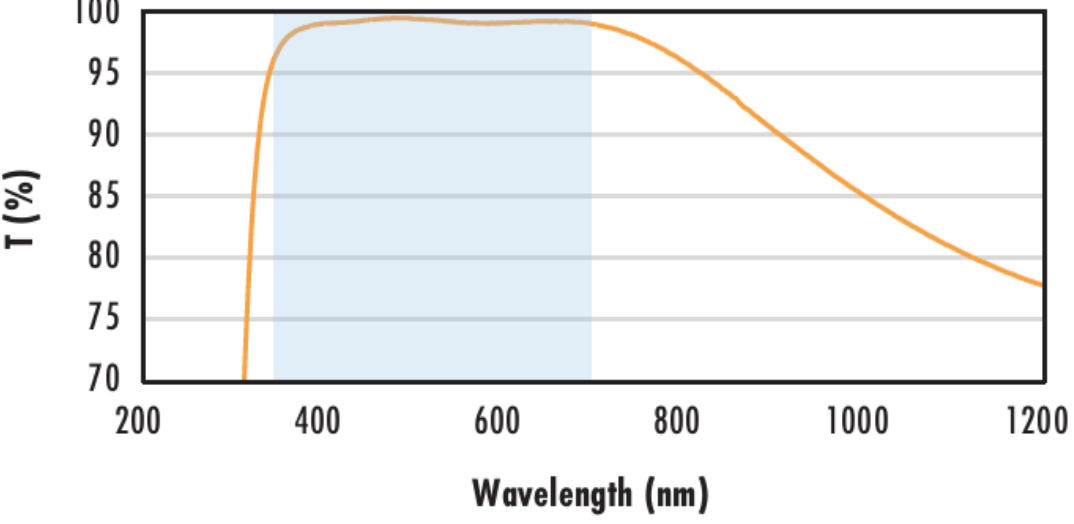
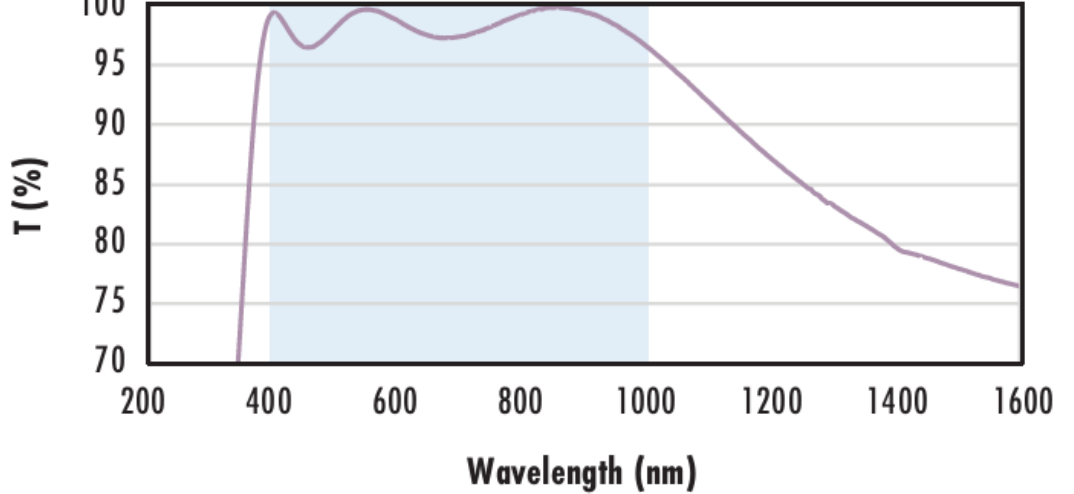
- Custom dimensions, materials, coatings, and more
- High-precision surface quality and flatness
- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

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](#), [MgF₂](#), [VIS 0°](#), [NIR I](#), [NIR II](#), [VIS-EXT](#), and [VIS-NIR](#)

Technical Information

N-BK7	
<p style="text-align: center;">Uncoated N-BK7 Typical Transmission</p> 	<p>Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.</p> <p style="text-align: center;">Click Here to Download Data</p>
<p style="text-align: center;">N-BK7 with MgF₂ Coating Typical Transmission</p> 	<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 style="text-align: center;">$R_{avg} \leq 1.75\% @ 400 - 700\text{nm}$ (N-BK7)</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p style="text-align: center;">Click Here to Download Data</p>
<p style="text-align: center;">N-BK7 with VIS-EXT Coating Typical Transmission</p> 	<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 style="text-align: center;">$R_{avg} \leq 0.5\% @ 350 - 700\text{nm}$</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p style="text-align: center;">Click Here to Download Data</p>
<p style="text-align: center;">N-BK7 with VIS-NIR Coating Typical Transmission</p> 	<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 style="text-align: center;">$R_{abs} \leq 0.25\% @ 880\text{nm}$ $R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$ $R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p style="text-align: center;">Click Here to Download Data</p>

**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.

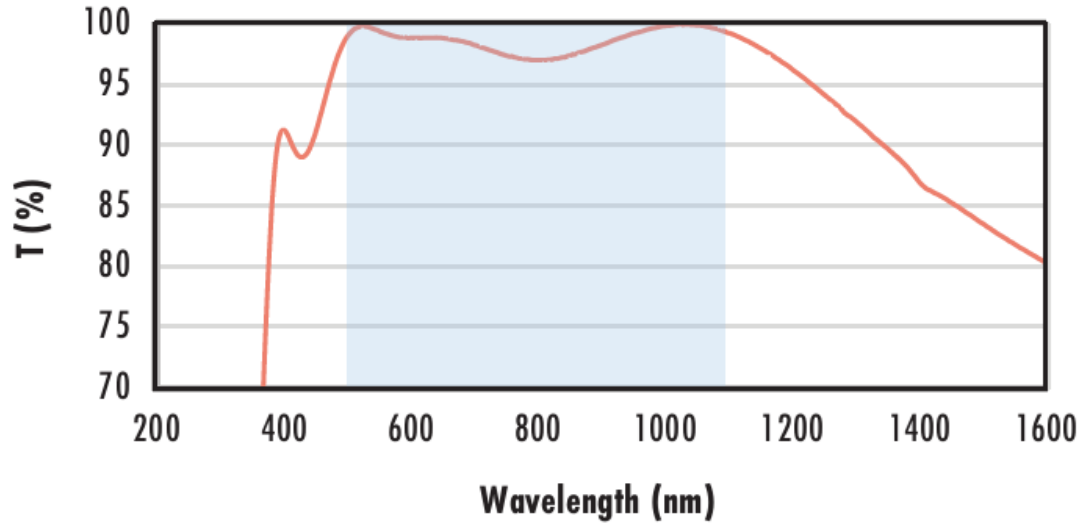
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

**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:

$$R_{abs} \leq 0.25\% @ 532\text{nm}$$

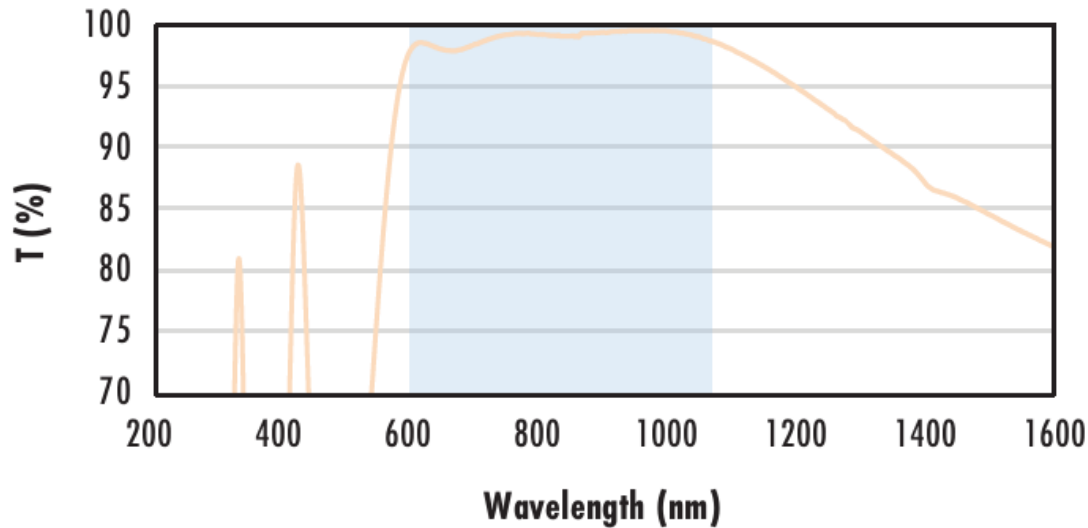
$$R_{abs} \leq 0.25\% @ 1064\text{nm}$$

$$R_{avg} \leq 1.0\% @ 500 - 1100\text{nm}$$

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.

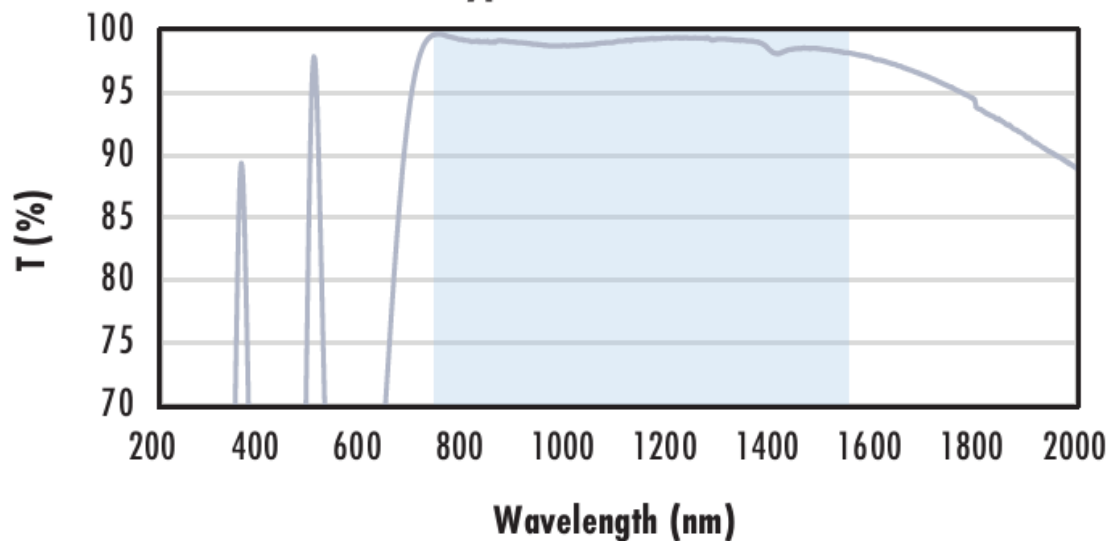
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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](#)

Compatible Mounts

