

TECHSPEC[®] 3mm Dia. x 3mm FL Uncoated, Double-Convex Lens



Stock **#32-023** 20+ In Stock

[Other Coating Options](#)

-

1

+

S\$76⁻¹⁷

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Volume Pricing	
Qty 1-9	S\$76.17 each
Qty 10-24	S\$68.70 each
Qty 25-99	S\$60.86 each
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SPECIFICATIONS

General

Type:

Double-Convex Lens	
Physical & Mechanical Properties	
3.00 +0.0/-0.025	Diameter (mm):
30-45, typical	Centering (arcmin):
Protective as needed	Bevel:
2.30	Center Thickness CT (mm):
±0.05	Center Thickness Tolerance (mm):
1.64	Edge Thickness ET (mm):
2.5	Clear Aperture CA (mm):
Optical Properties	
2.21	Back Focal Length BFL (mm):
3.00	Effective Focal Length EFL (mm):
Uncoated	Coating:
N-SF5	Substrate:
20-10	Surface Quality:
1.5λ	Power (P-V) @ 632.8nm:
λ/4	Irregularity (P-V) @ 632.8nm:
3.50	Radius R ₁ =R ₂ (mm):
1.00	f/#:
587.6	Focal Length Specification Wavelength (nm):
±1	Focal Length Tolerance (%):
0.50	Numerical Aperture NA:
380 - 2500	Wavelength Range (nm):
Regulatory Compliance	
Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 235:

PRODUCT DETAILS

- Ideal for Imaging Applications
- Minimize Aberrations Including Spherical and Coma
- [UV Fused Silica DCX Lenses](#) Available
- Anti-Reflection Coating Options: [MgF₂](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#)

TECHSPEC® Uncoated 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 canceled due to the symmetric lens design. TECHSPEC® Uncoated Double-Convex Lenses resist the effects from various aberrations in a lens design that are ultimately seen in performance and affect modulation transfer function (MTF), spot size, telecentricity, depth of field (DOF), and others. These lenses are available in a variety of substrates and coating options for the visible and NIR spectra.

TECHNICAL INFORMATION



N-BK7

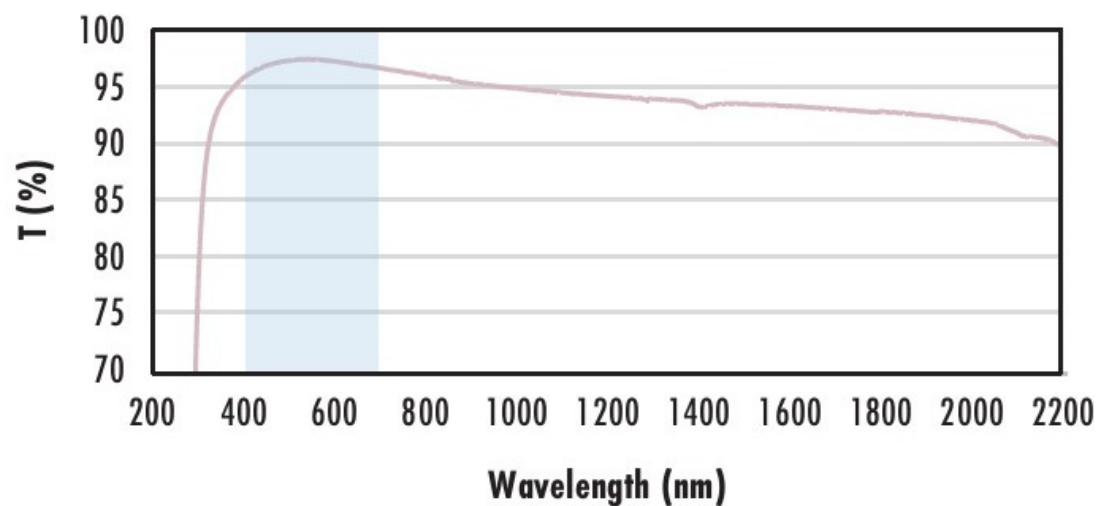
Uncoated N-BK7 Typical Transmission



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

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N-BK7 with MgF_2 Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with MgF_2 (400-700nm) coating at 0° AOI.

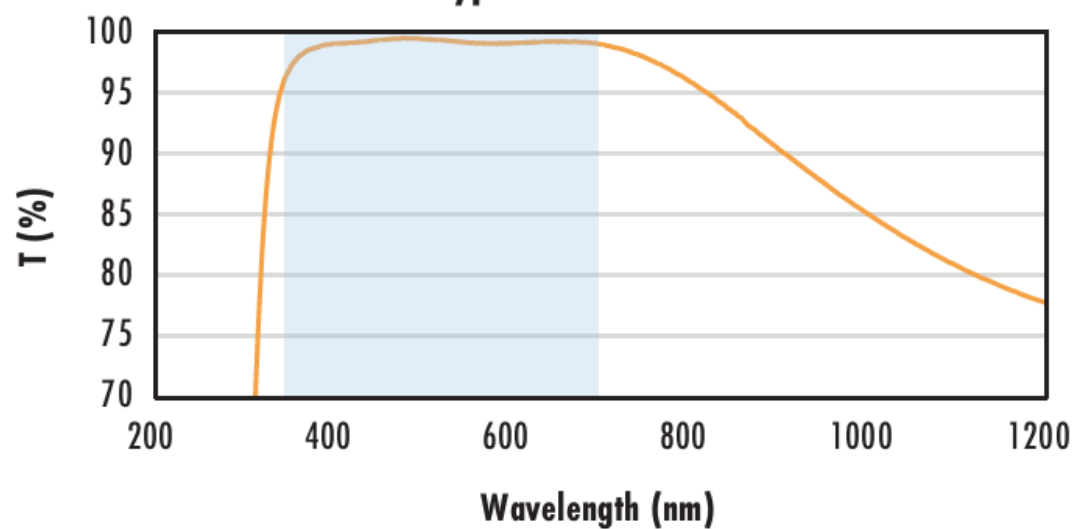
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

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

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

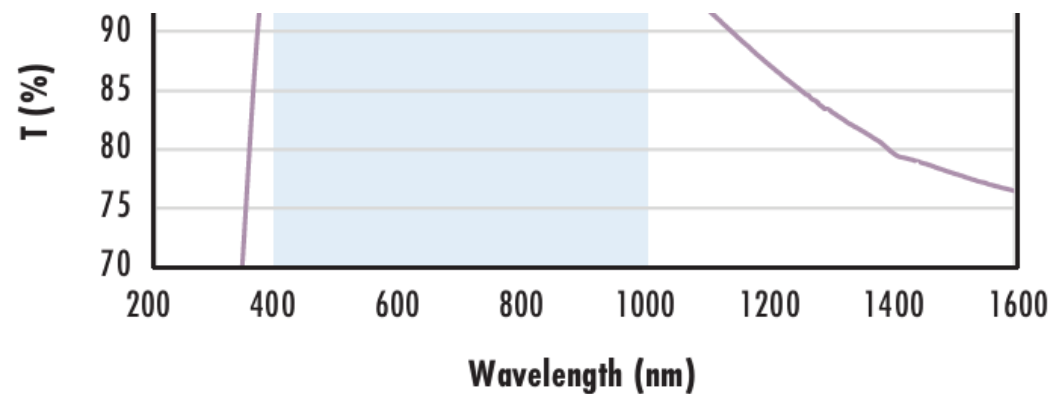
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N-BK7 with VIS-NIR Coating Typical Transmission



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:

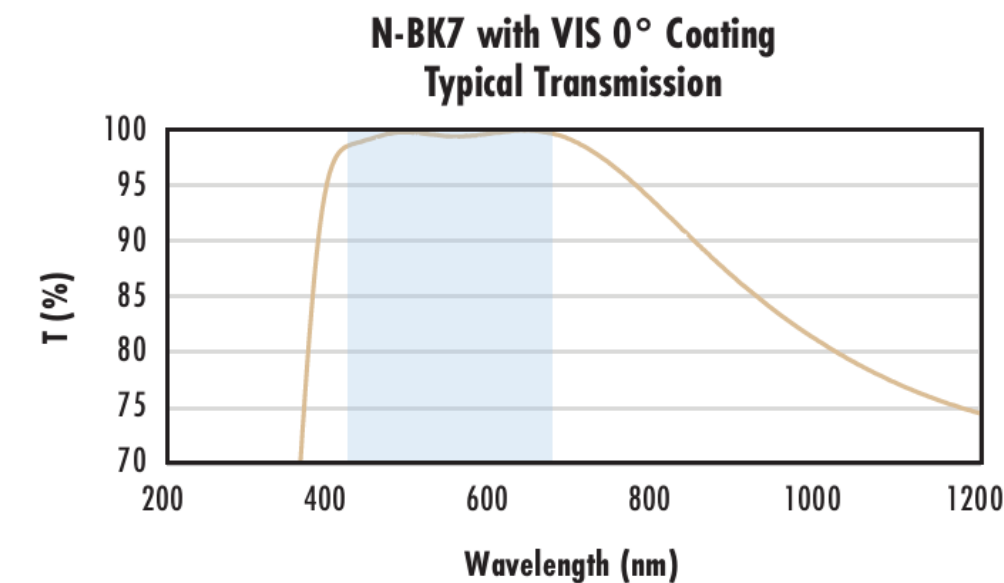


wavelength range, with the following specification:

$$\begin{aligned} R_{\text{abs}} &\leq 0.25\% \text{ @ } 880\text{nm} \\ R_{\text{avg}} &\leq 1.25\% \text{ @ } 400 - 870\text{nm} \\ R_{\text{avg}} &\leq 1.25\% \text{ @ } 890 - 1000\text{nm} \end{aligned}$$

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

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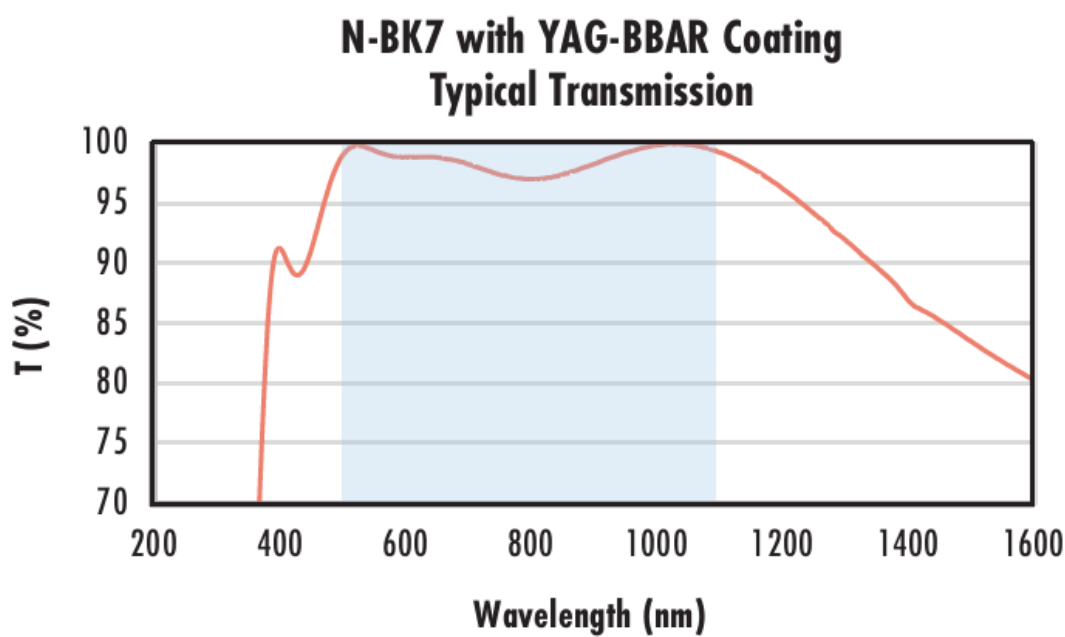
Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

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.

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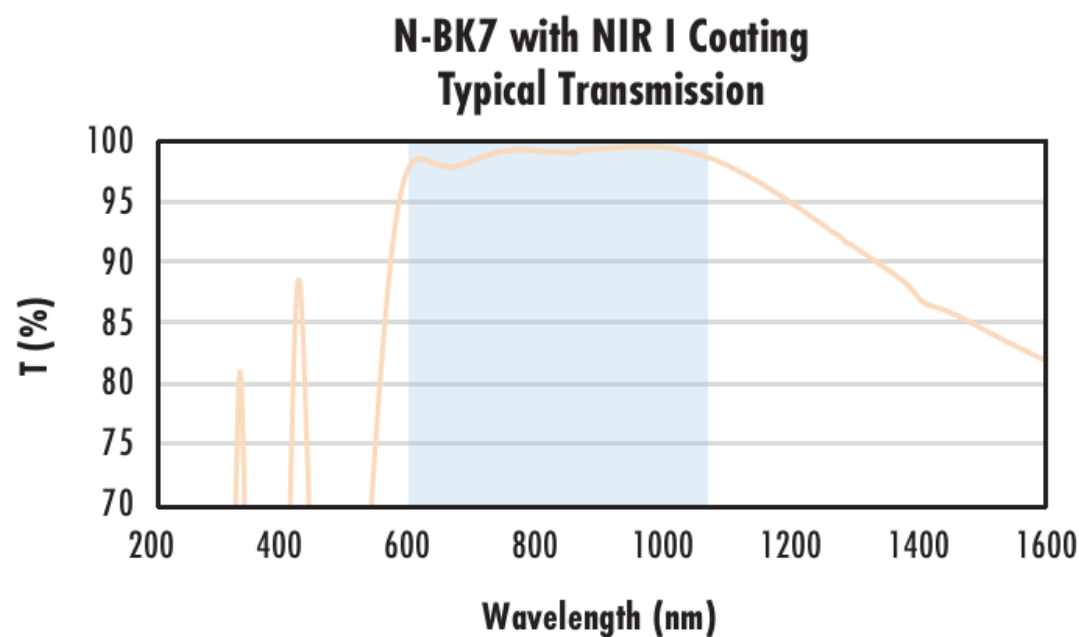
Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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

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

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

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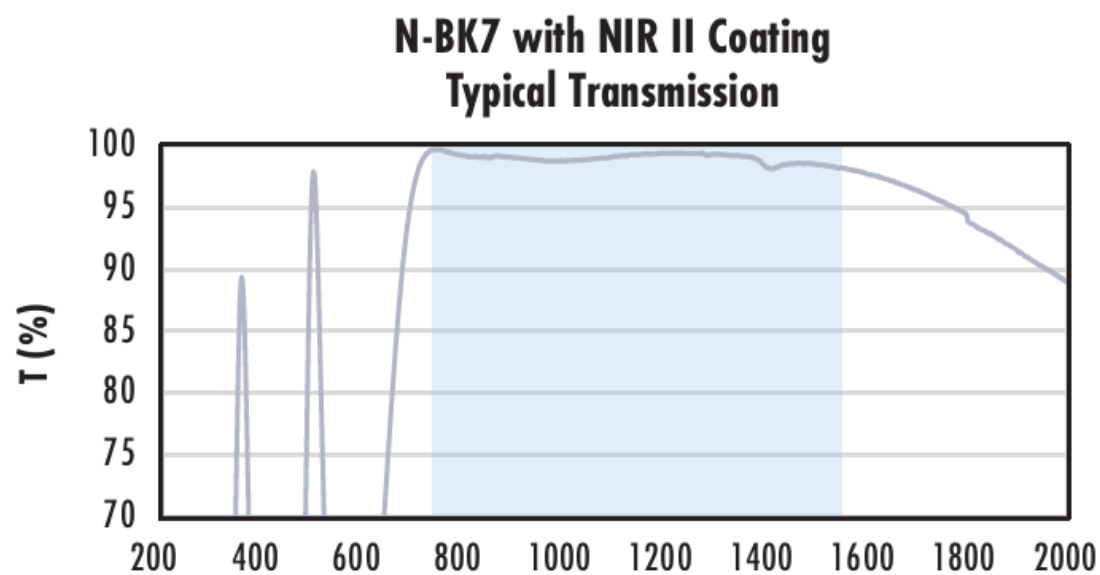
Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.

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.

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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:

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

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

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Wavelength (nm)	
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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

