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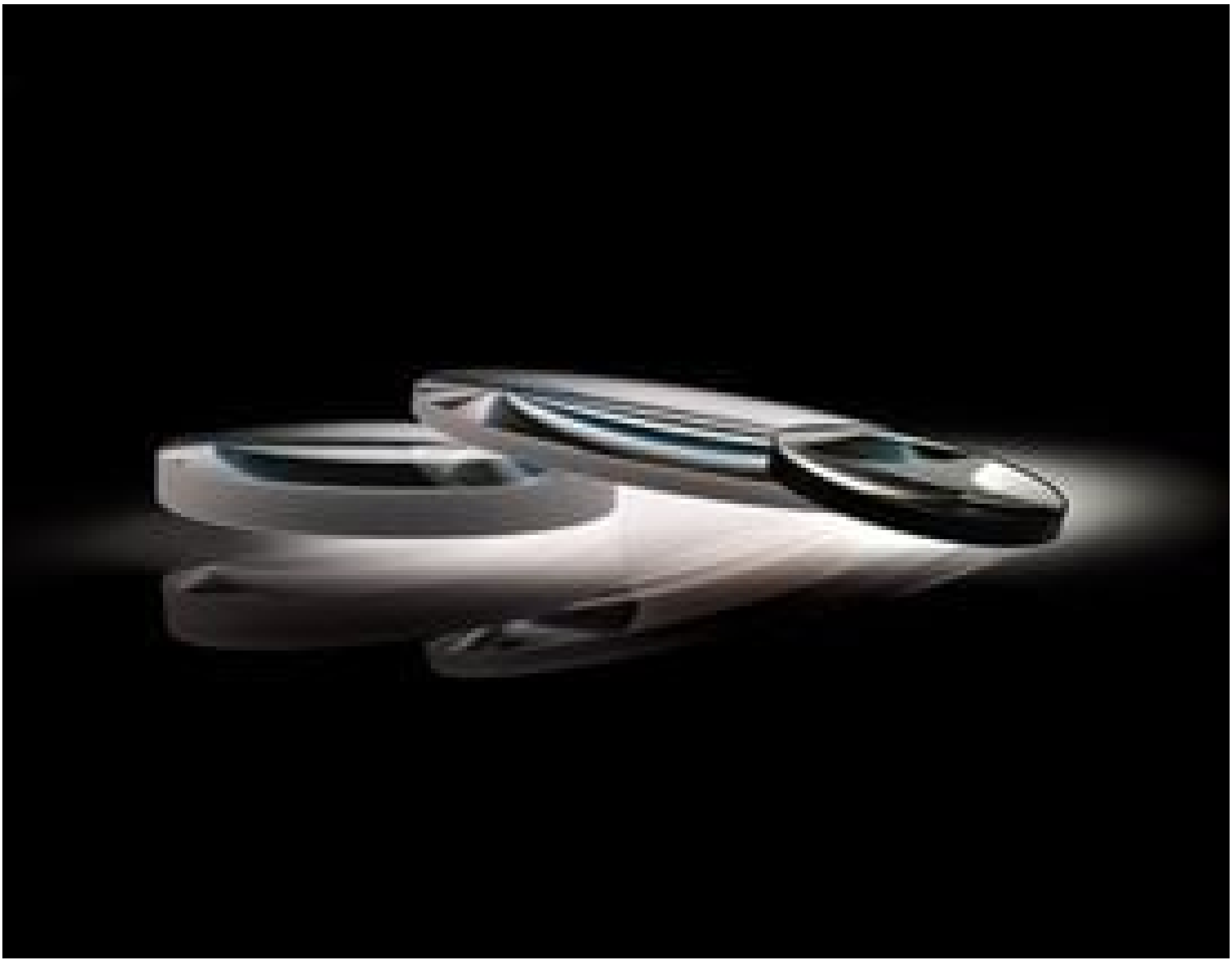
TECHSPEC® 50mm Dia. x 150mm FL, NIR II, Inked, Double-Convex Lens



Stock **#67-675-INK** CONTACT US

Other Coating Options

- 1 + C$119.70

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Volume Pricing	
Qty 1-9	**C$119.70** each
Qty 10-24	**C$107.80** each
Qty 25-99	**C$95.90** each
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General

Type:

Double-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

50.00 ±0.025

Centering (arcmin):
<1

Center Thickness CT (mm):
9.00

Center Thickness Tolerance (mm):
±0.10

Edge Thickness ET (mm):
4.9

Clear Aperture CA (mm):
49.00

Optical Properties

Back Focal Length BFL (mm):
147.00

Effective Focal Length EFL (mm):
150.00

Coating:
NIR II (750-1550nm)

Coating Specification:
R_{abs} ≤1.5% @ 750 - 800nm
R_{abs} ≤1.0% @ 800 - 1550nm
R_{avg} ≤0.7% @ 750 - 1550nm

Substrate:
N-BK7

Surface Quality:
40-20

Power (P-V) @ 632.8nm:
1.5λ

Irregularity (P-V) @ 632.8nm:
λ/4

Radius R_1=-R_2 (mm):
153.49

f/#:
3.00

Focal Length Specification Wavelength (nm):
587.6

Focal Length Tolerance (%):
±1.00

Numerical Aperture NA:
0.17

Wavelength Range (nm):
750 - 1550

Damage Threshold, By Design:
8 J/cm^2 @ 1064nm, 10ns

Regulatory Compliance

Certificate of Conformance:
View

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

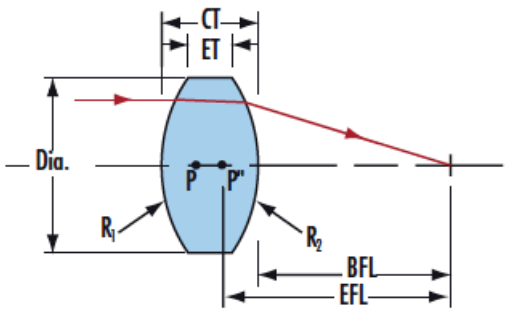
Learn more about our custom manufacturing capabilities or submit an inquiry here.

Product Details

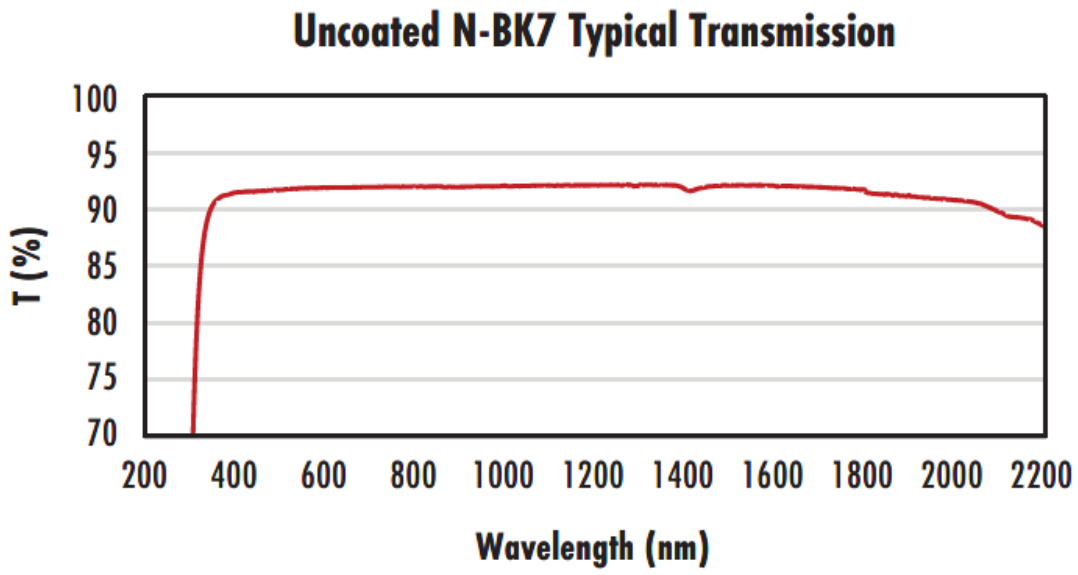
- AR Coated to Provide <0.7% Reflectance per Surface for 750 - 1550nm
- Minimize Aberrations Including Spherical and Coma
- UV Fused Silica DCX Lenses Available
- Other Coating Options Available: Uncoated, MgF_2, VIS 0°, NIR I, VIS-EXT, VIS-NIR, and YAG-BBAR

TECHSPEC® NIR II 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® NIR II Coated Double-Convex Lenses are available in a variety of substrates and coating options for the visible and NIR spectra.

Technical Information



N-BK7



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

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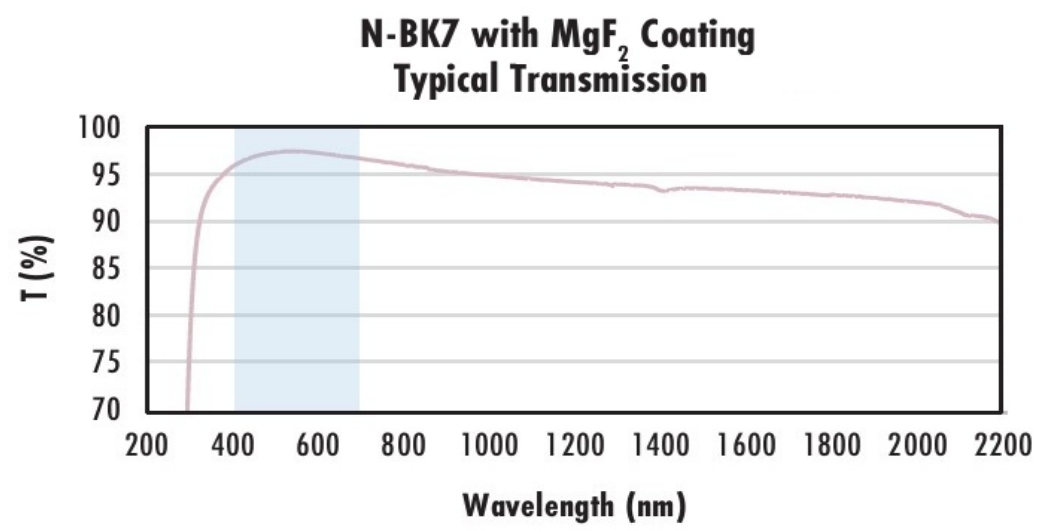

Typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) coating at 0° AOI.

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

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

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

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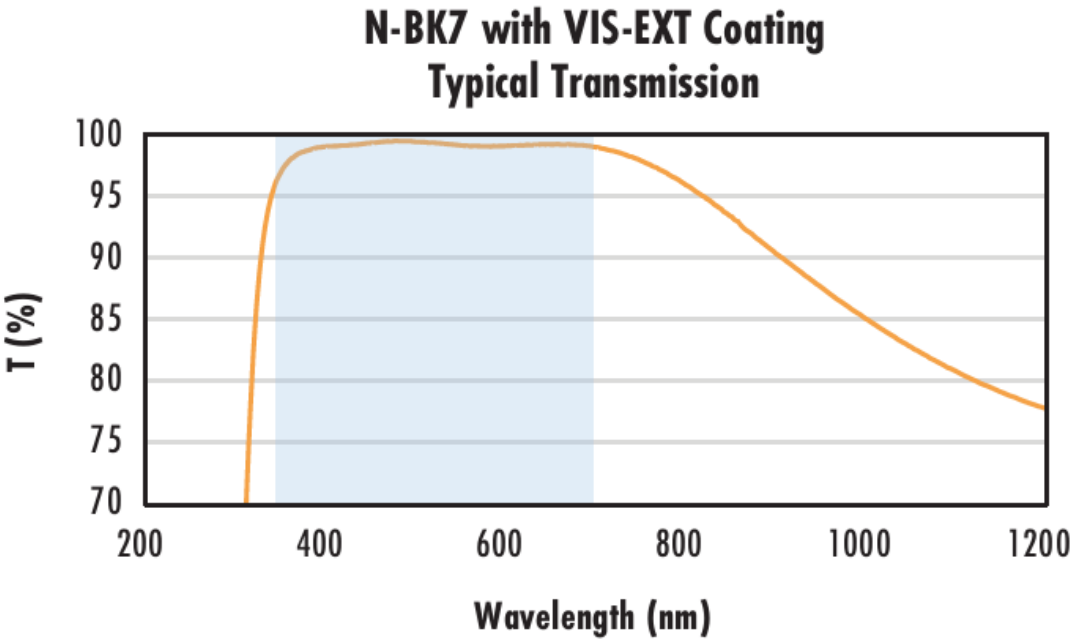

Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.

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

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

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

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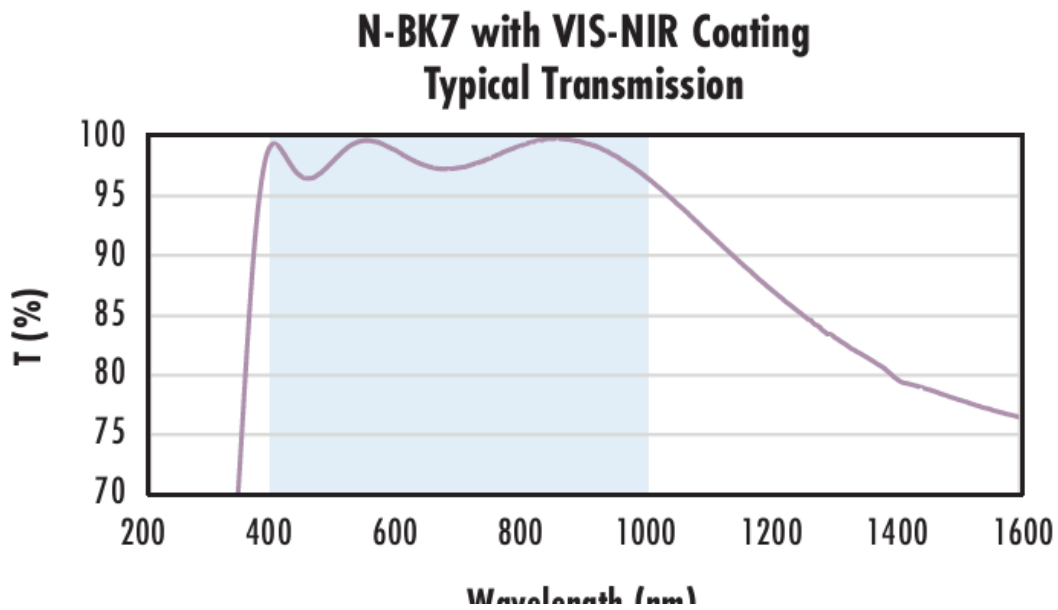

Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.

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

$R_{abs} \leq 0.25\%$ @ 880nm
$R_{avg} \leq 1.25\%$ @ 400 - 870nm
$R_{avg} \leq 1.25\%$ @ 890 - 1000nm

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

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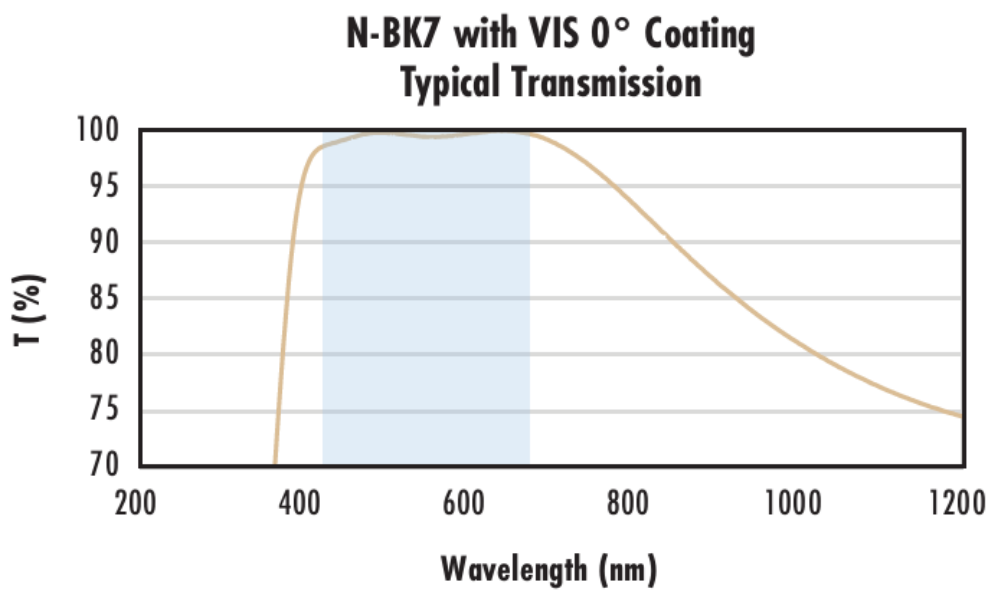

Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

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

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

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

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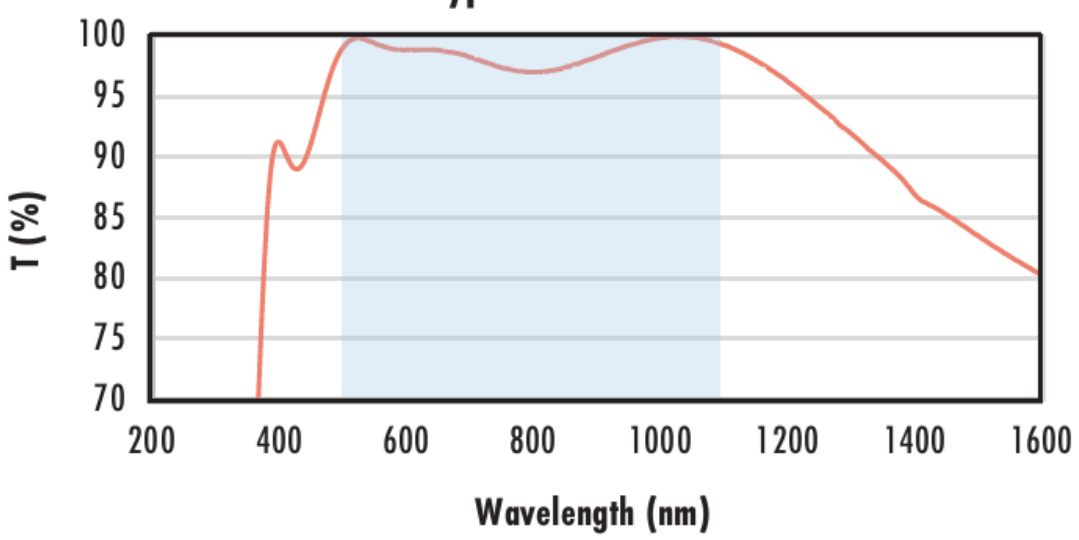

Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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

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

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

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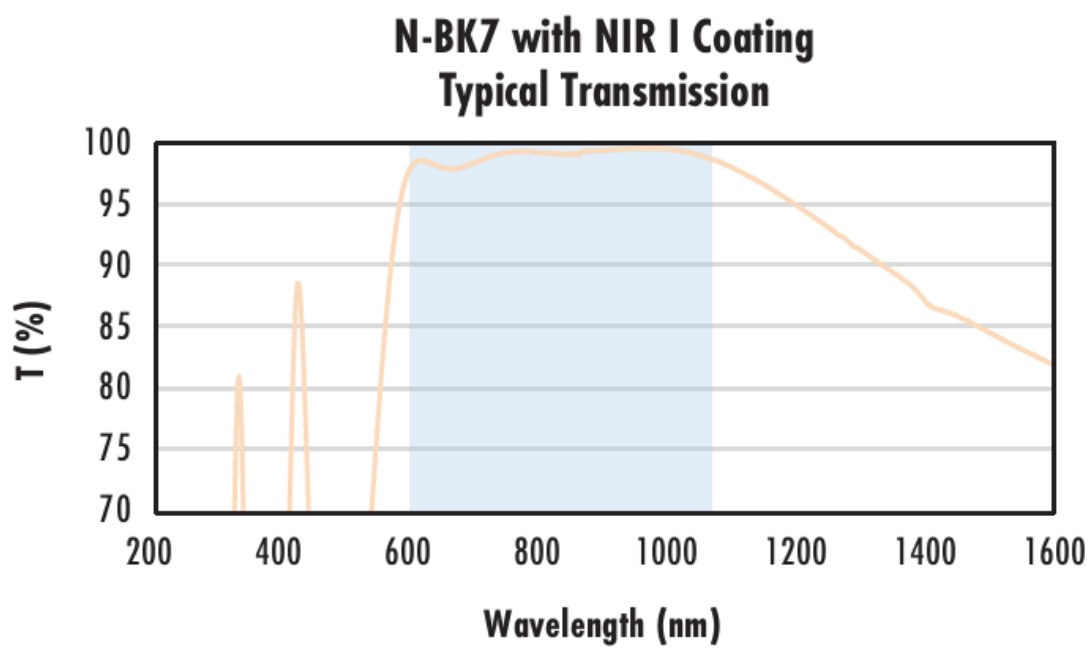

Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.

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

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

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

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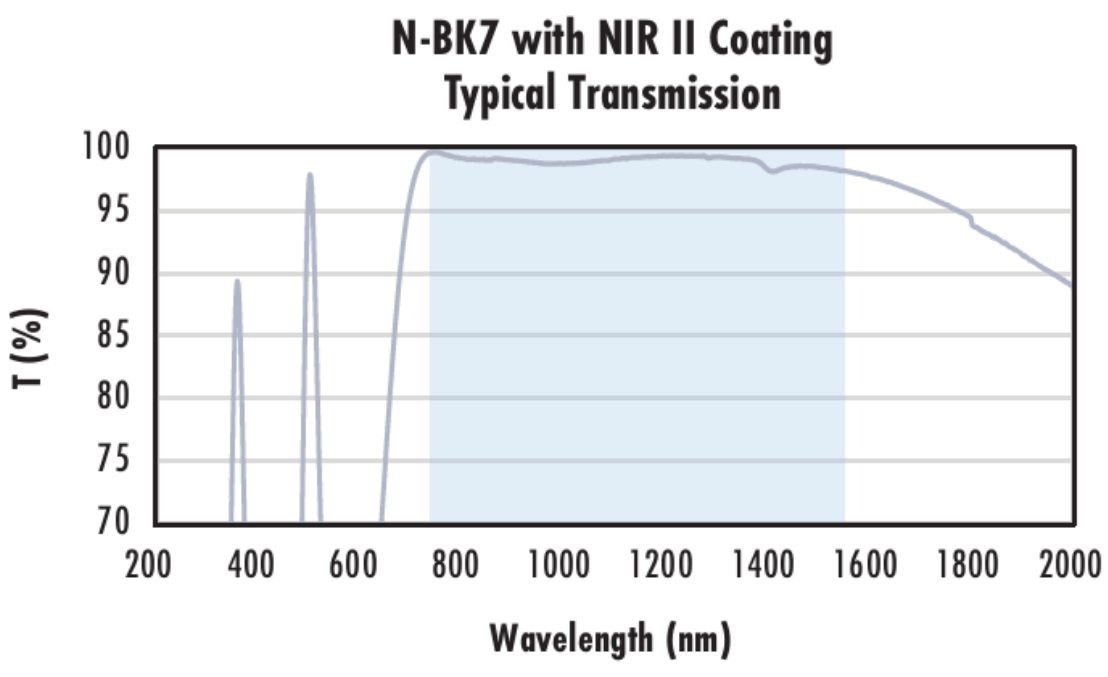

Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.

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

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

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

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Compatible Mounts

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