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TECHSPEC® 20mm Diameter NIR I, Ultra-Thin N-BK7 Window

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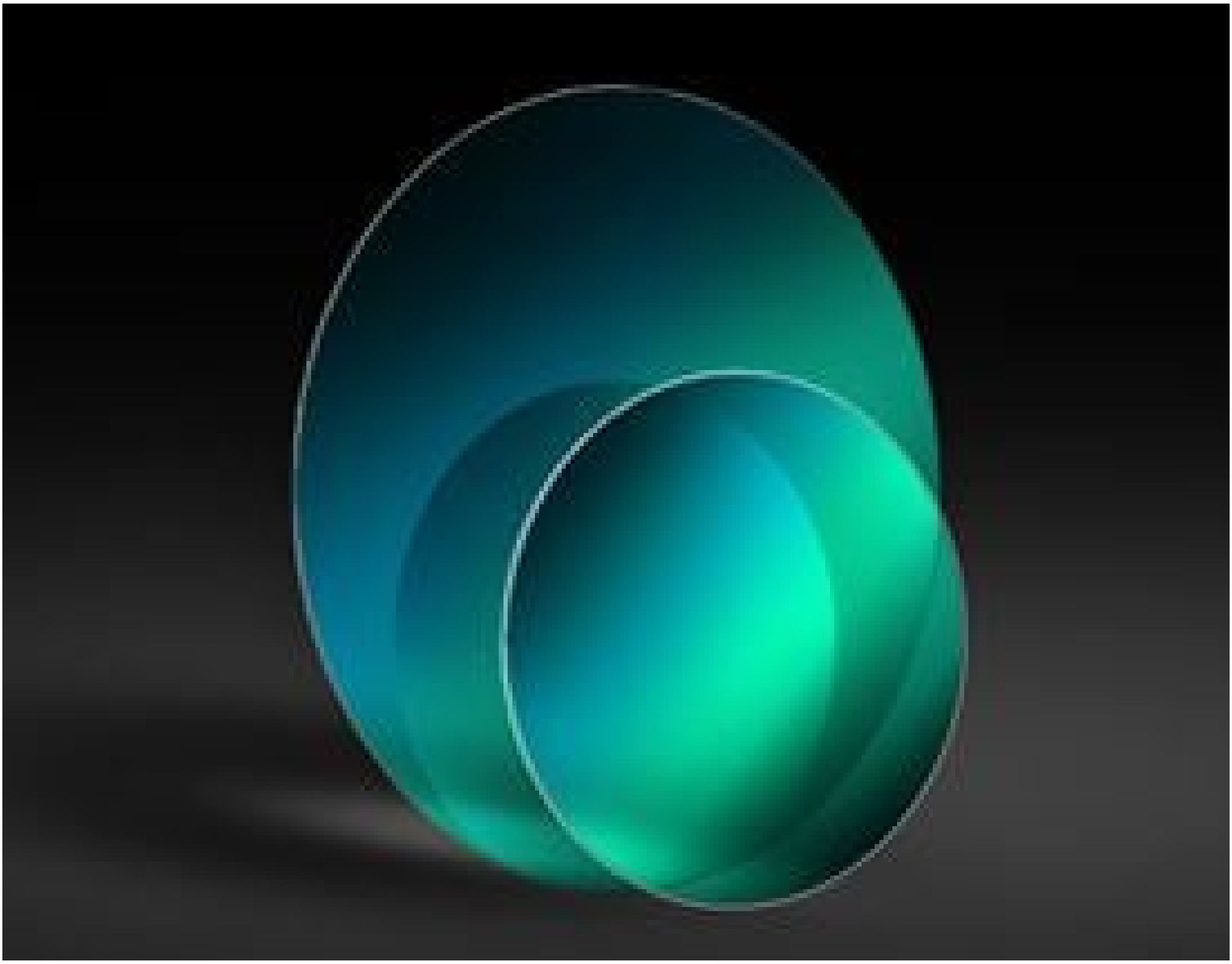

Ultra-Thin N-BK7 Windows

Stock **#22-047** **5 In Stock**

- 1 + A$208.00

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Volume Pricing	
Qty 1-5	**A$208.00** each
Qty 6-25	**A$163.20** each
Qty 26-49	**A$157.60** each
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General

Type:
Protective Window

Type of Window:
Glass

Physical & Mechanical Properties

Clear Aperture CA (mm):

18.00

Diameter (mm):

20.00 +0.00/-0.10

Thickness (mm):

0.20 ±0.025

Bevel:

Protective as needed

Edges:

Fine Ground

Parallelism (arcsec):

<30

Poisson's Ratio:

0.21

Young's Modulus (GPa):

82

Knoop Hardness (kg/mm^2):

610.00

Optical Properties

Coating:

NIR I (600-1050nm)

Substrate:

N-BK7

Index of Refraction (n_d):

1.516

Surface Quality:

20-10

Transmitted Wavefront, P-V:

λ/2

Abbe Number (v_d):

64.17

Coating Specification:

R_{avg} ≤0.5% @ 600 - 1050nm

Wavelength Range (nm):

600 - 1050

Damage Threshold, By Design:

7 J/cm^2 @ 1064nm, 10ns

Material Properties

Density (g/cm^3):

2.51

Coefficient of Thermal Expansion CTE (10^{-6}/°C):

7.1 (-30 to +70°C)
8.3 (+20 to +300°C)

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

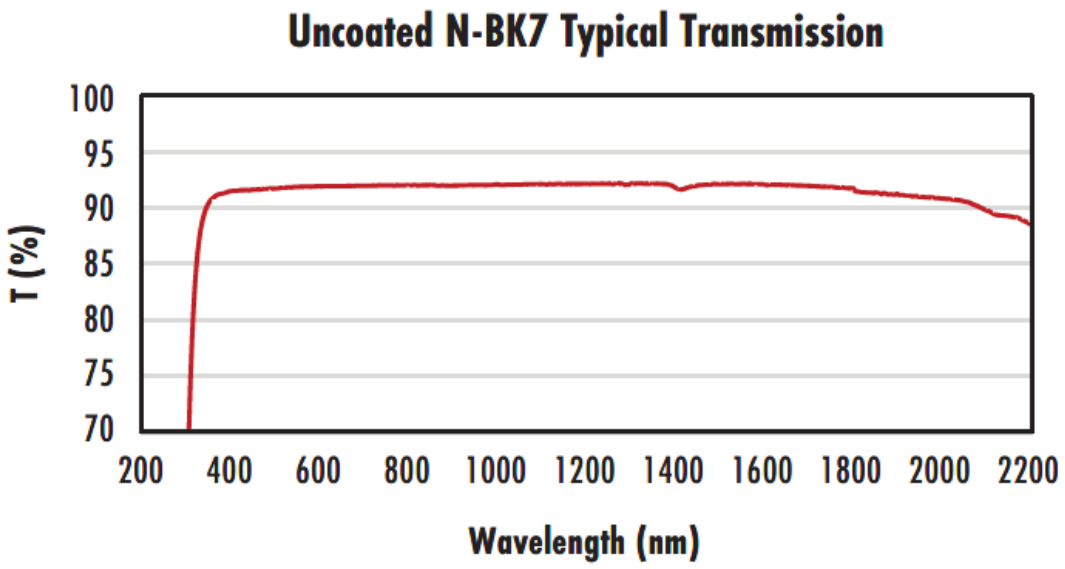
- Ultra-Thin 0.20mm Thickness
- Precision N-BK7 Substrate
- Extremely Lightweight

TECHSPEC® Ultra-Thin N-BK7 Windows are our thinnest windows available and are at least 1/10 the thickness of our traditional N-BK7 windows. Their extremely thin designs make them ideal for both weight and size-sensitive applications. Additionally, their high tolerance design yields minimal beam distortion and scatter. TECHSPEC® Ultra-Thin N-BK7 Windows are available uncoated or with a MgF2 anti-reflection coating. For custom sizes or coating options, please contact our **Sales Department**.

Note: The Ultra-Thin N-BK7 Windows are very fragile. Handle these windows with care.

Technical Information

N-BK7



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

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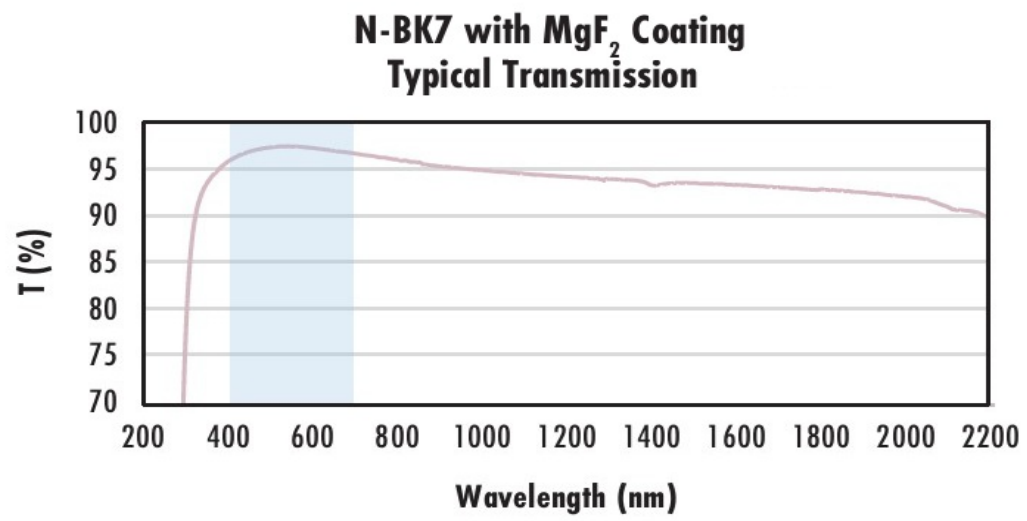

Typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) coating at 0° AOI.

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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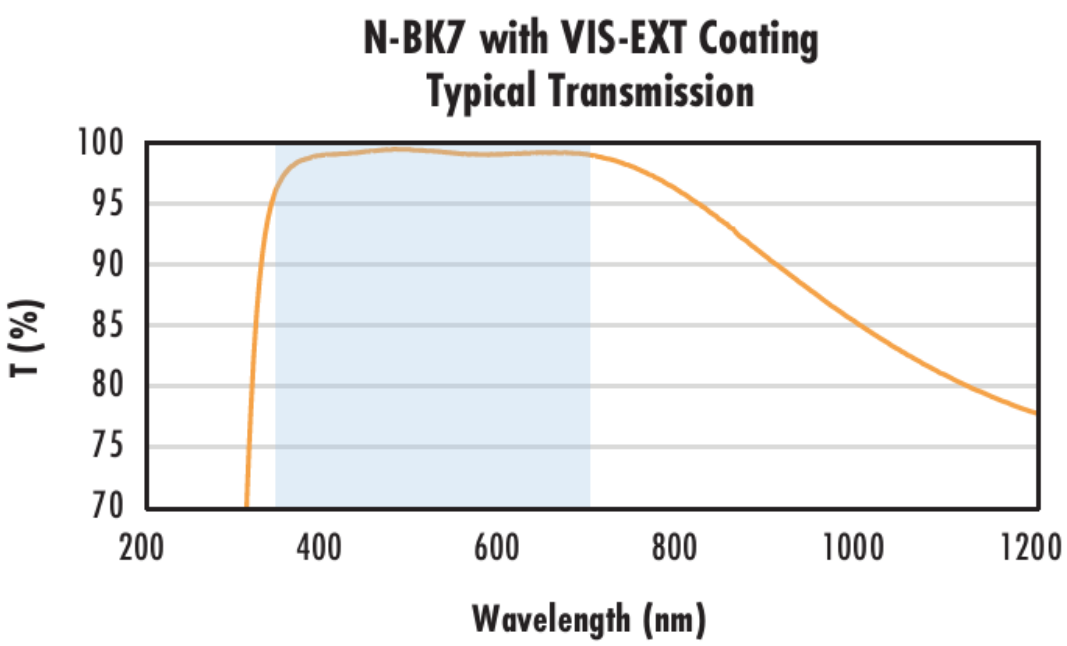

Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.

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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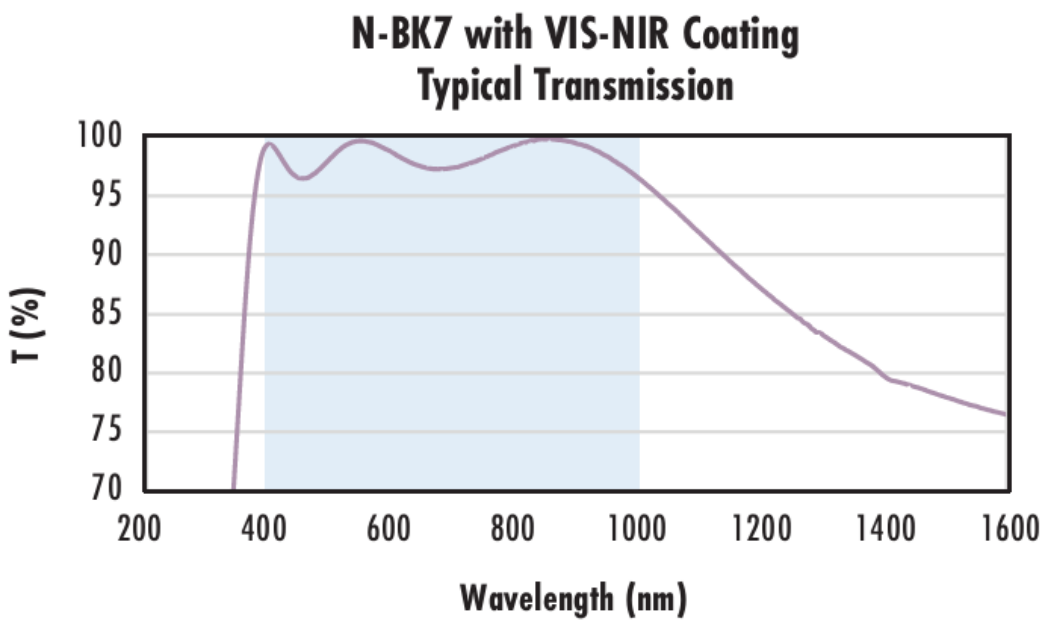

Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.

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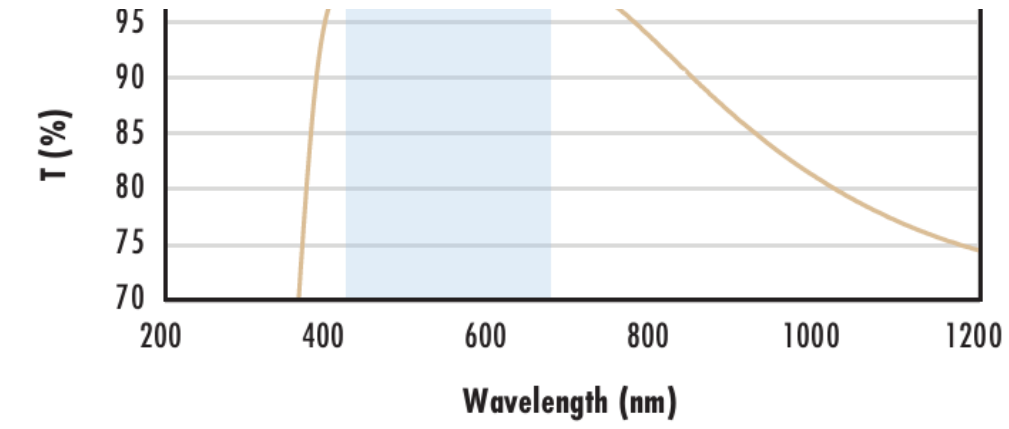
Typical transmission of a 3mm thick N-BK7 window with VIS 0°



(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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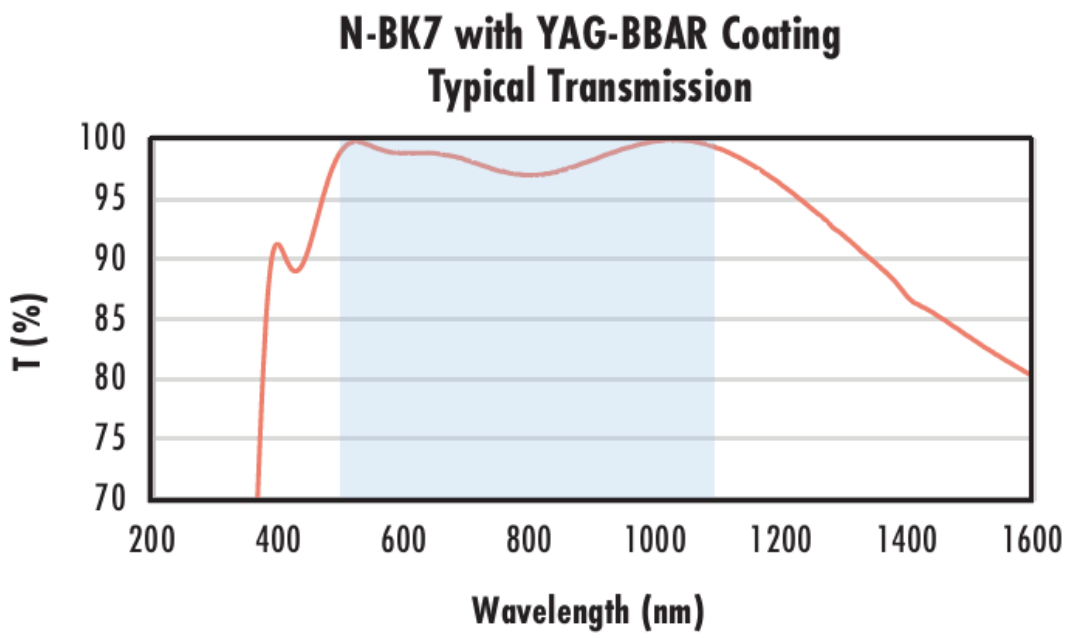

Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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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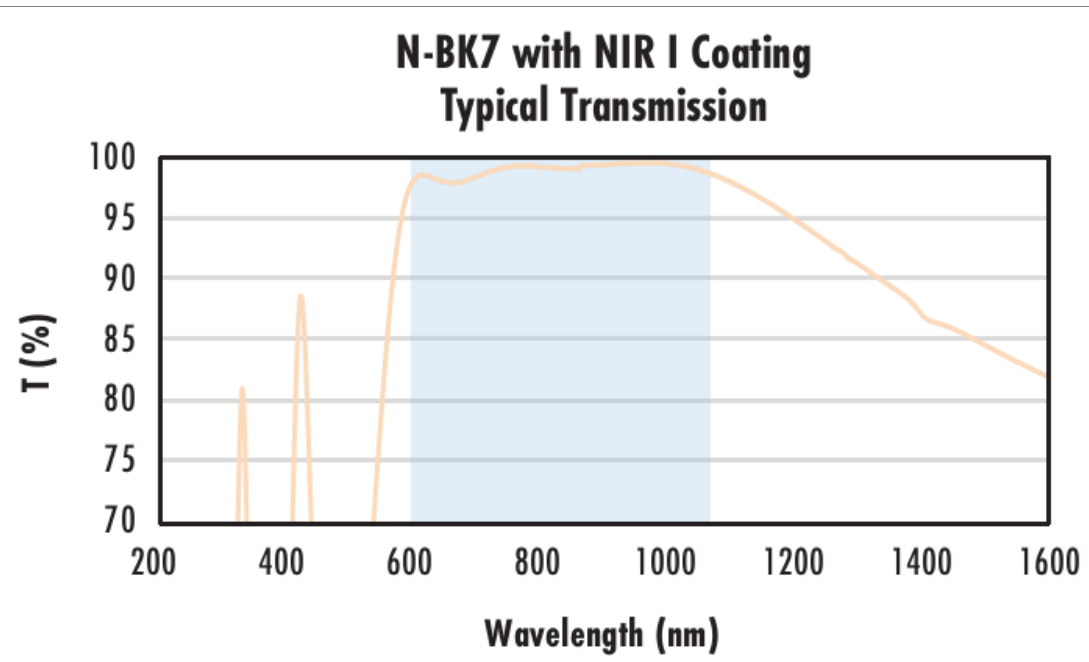

Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.

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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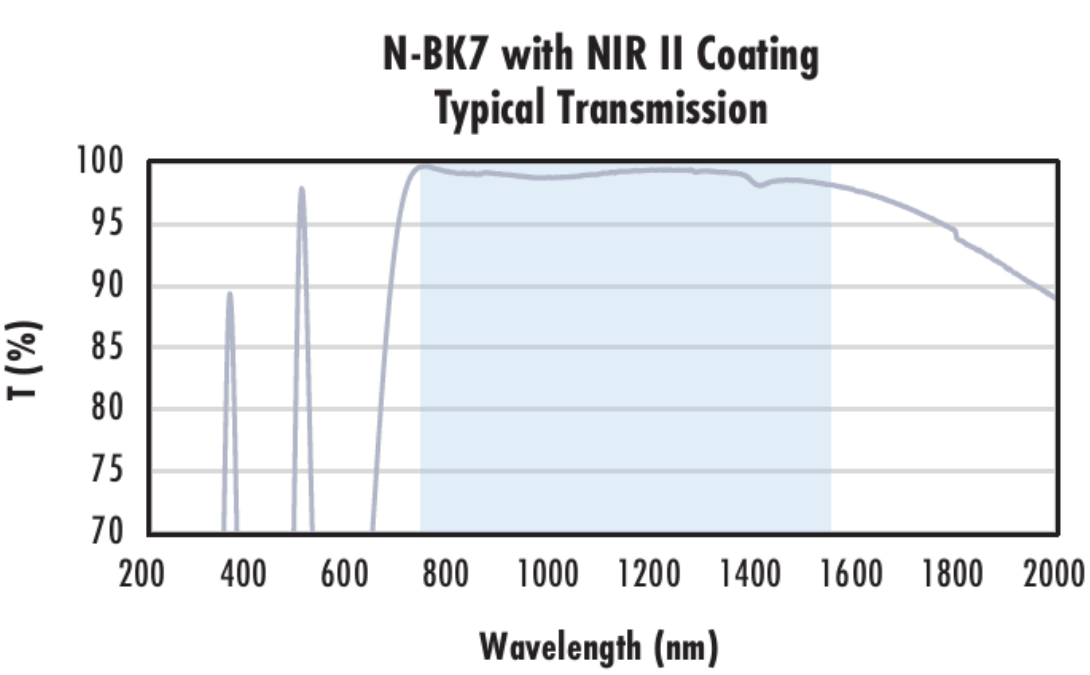

Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.

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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