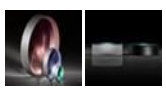
TECHSPEC 50mm Diameter x -100 FL, VIS-NIR Coated, Plano-Concave Lens

TECHSPEC VIS-NIR Coated Plano-Concave (PCV) Lenses



Stock **#45-925** CONTACT US

Other Coating Options

- 1 + A$132.00

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Volume Pricing	
Qty 1-9	**A$132.00** each
Qty 10-25	**A$118.40** each
Qty 26-49	**A$105.60** each
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SPECIFICATIONS

General

Type:
Plano-Concave Lens

Physical & Mechanical Properties

Diameter (mm):
50.00 +0.0/-0.025

Bevel:
Protective as needed

Center Thickness CT (mm):
5.00

Center Thickness Tolerance (mm):
±0.10

Centering (arcmin):
<1

Clear Aperture CA (mm):
49.00

Edge Thickness ET (mm):
11.23

Optical Properties

Effective Focal Length EFL (mm):
-100.00

Substrate:
N-BK7

f/#:
2.00

Numerical Aperture NA:
0.25

Coating:
VIS-NIR (400-1000nm)

Wavelength Range (nm):
400 - 1000

Back Focal Length BFL (mm):
-103.30

Coating Specification:
R_{abs} ≤0.25% @ 880nm
R_{avg} ≤1.25% @ 400 - 870nm
R_{avg} ≤1.25% @ 890 - 1000nm

Focal Length Specification Wavelength (nm):
587.6

Focal Length Tolerance (%):
±1

Radius R_1 (mm):
-51.68

Surface Quality:
40-20

Damage Threshold, By Design:
5 J/cm^2 @ 532nm, 10ns

Power (P-V) @ 632.8nm:
1.5λ

Irregularity (P-V) @ 632.8nm:
λ/4

Regulatory Compliance

RoHS 2015:
Compliant

Certificate of Conformance:
View

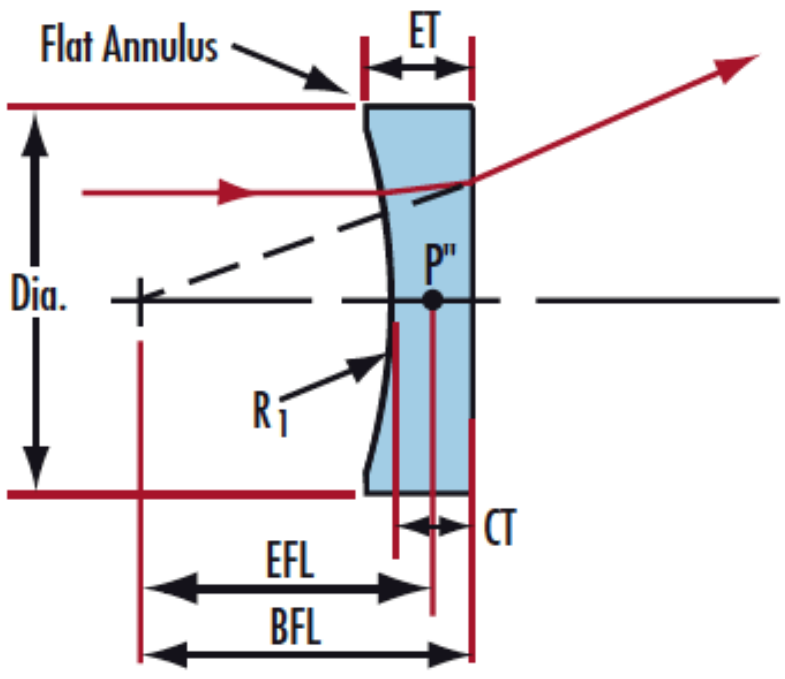
Reach 235:
Compliant

PRODUCT DETAILS

- AR Coated to Provide <1.25% Reflectance per Surface for 400 - 1000nm
- <0.25% Reflectance @ 880nm
- Designed for 0° Angle of Incidence
- Various Coating Options: Uncoated, VIS-EXT, MgF_2, VIS 0°, YAG-BBAR, NIR I, and NIR II

TECHSPEC® VIS-NIR Coated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the output side of the lens causing this lens to have a negative focal length. These lenses can be used for balancing aberrations created by other lenses within a system due to their negative spherical aberration. Plano-Concave (PCV) lenses are commonly used in a variety of applications including image reduction, beam expansion and telescopes. TECHSPEC® VIS-NIR Coated Plano-Concave (PCV) Lenses are optimized for transmission (>99%) in the near-infrared. These lenses are also available Uncoated, VIS-EXT, MgF_2, VIS 0°, YAG-BBAR, NIR I, or with NIR II AR coating options.

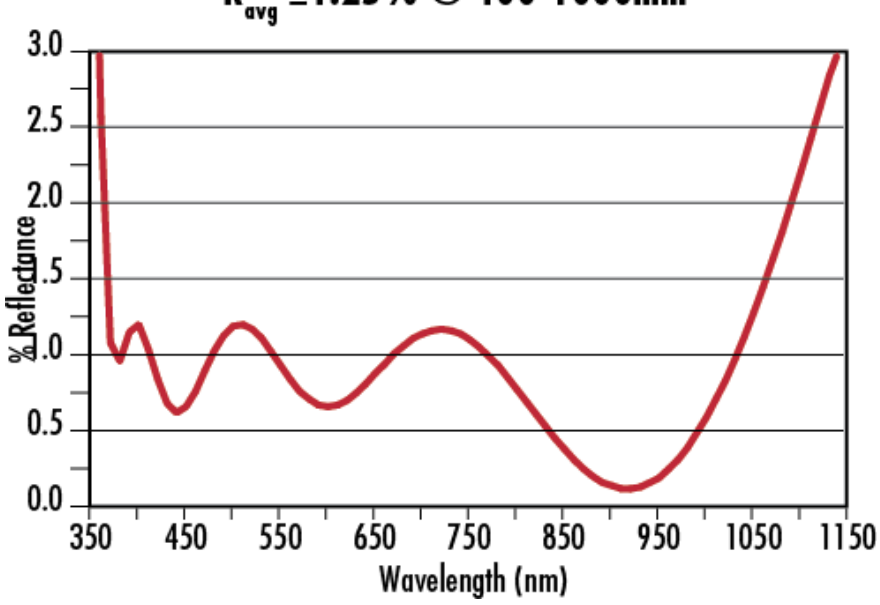
TECHNICAL INFORMATION



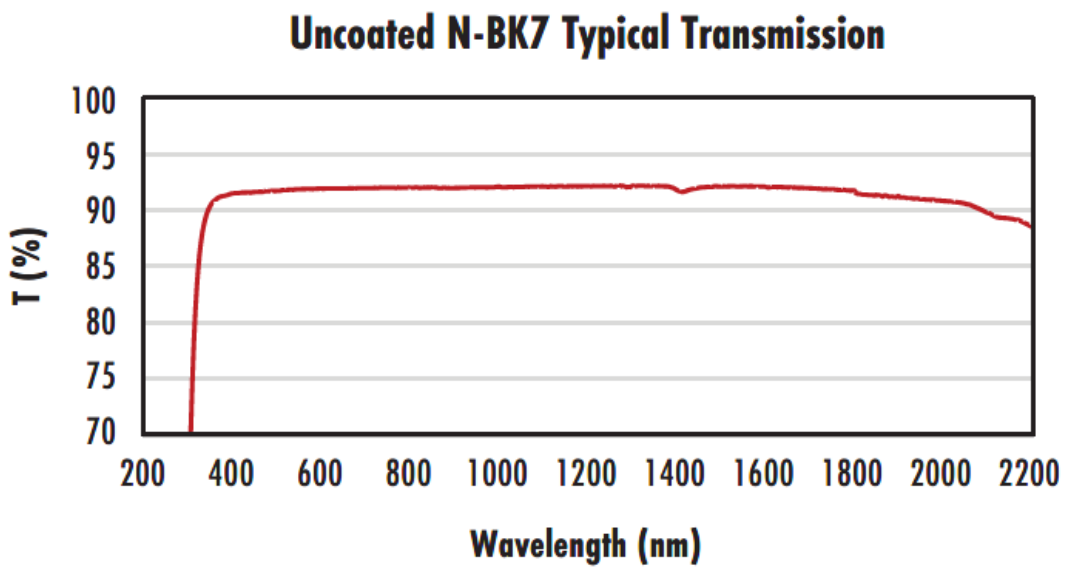
VIS-NIR Coating

R_{abs} ≤0.25% @ 880mm

R_{avg} ≤1.25% @ 400-1000mm



N-BK7



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

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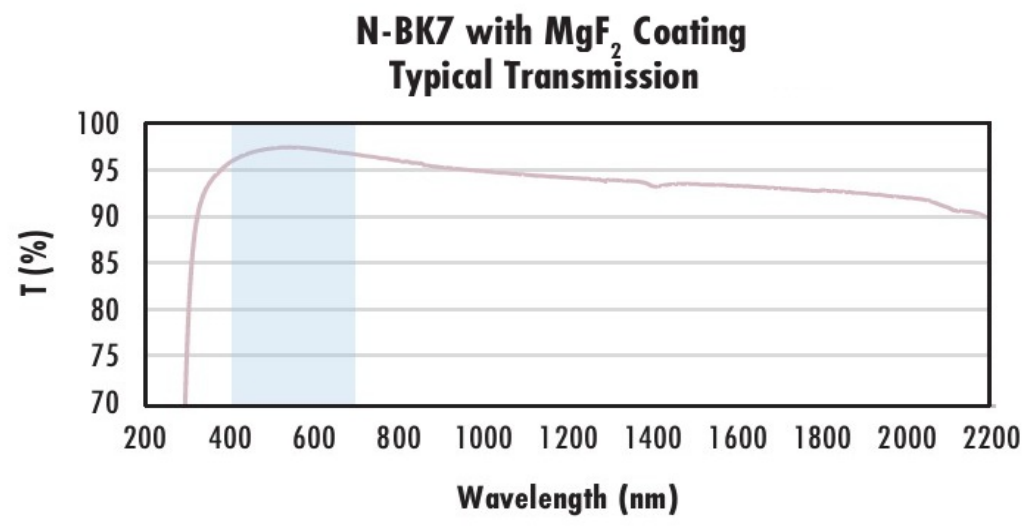

Typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) coating at 0° AOI.

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

R_{avg} ≤ 1.75% @ 400 - 700nm (N-BK7)

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

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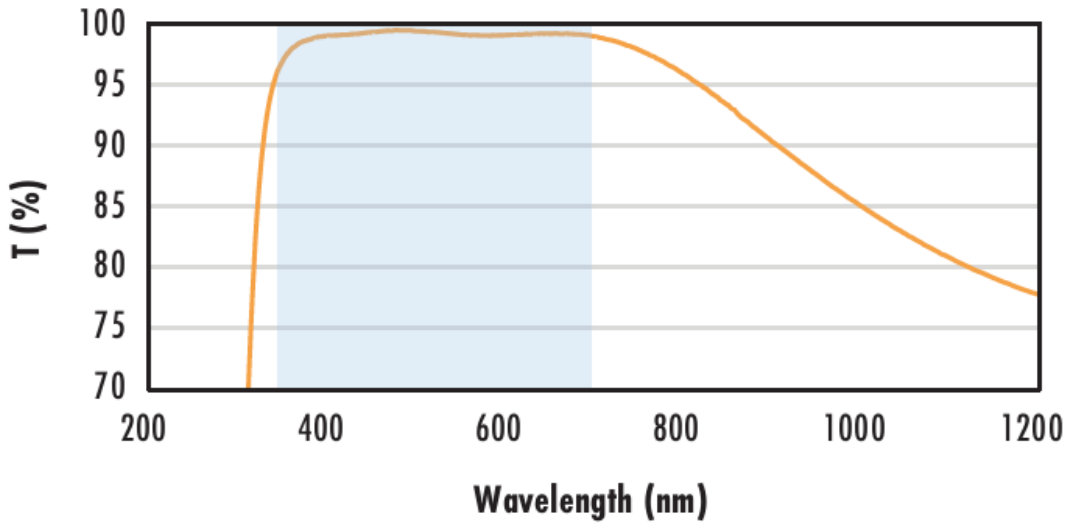

Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.

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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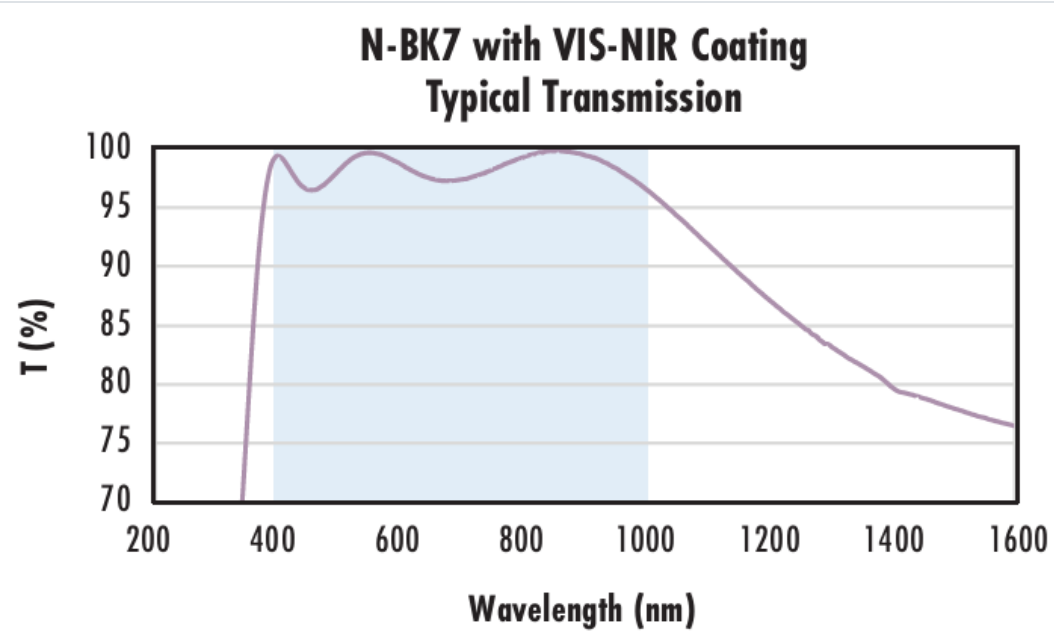

Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.

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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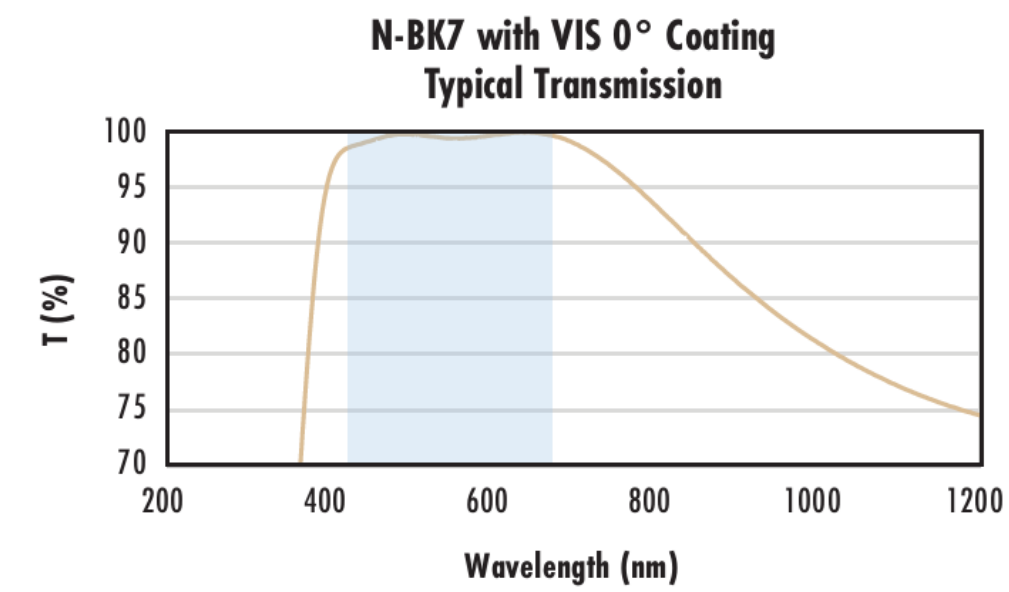

Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

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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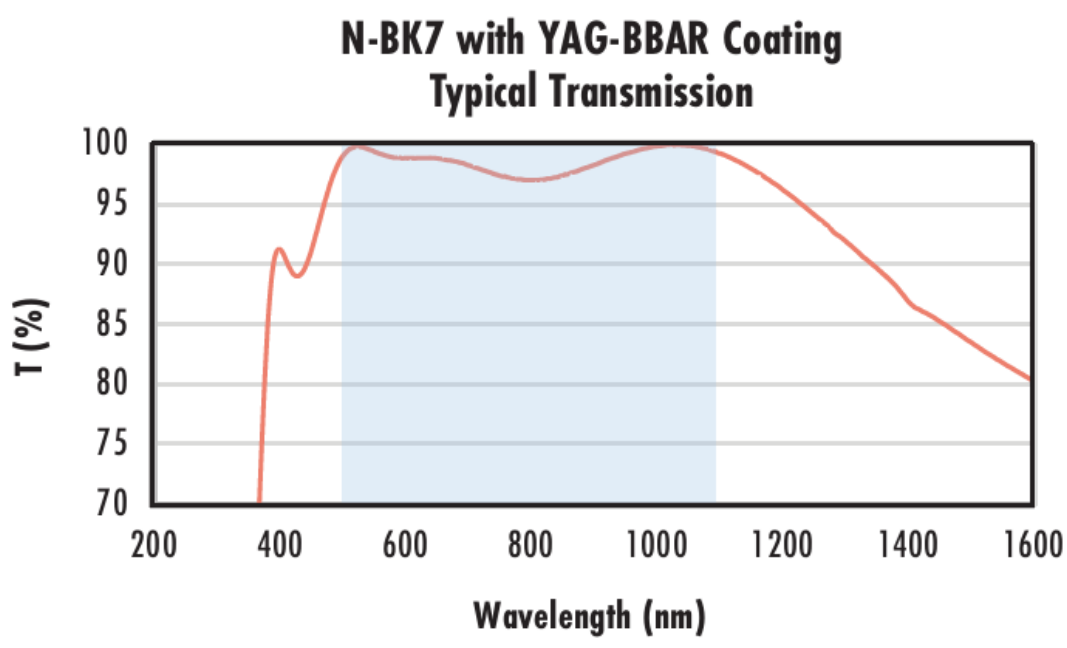

Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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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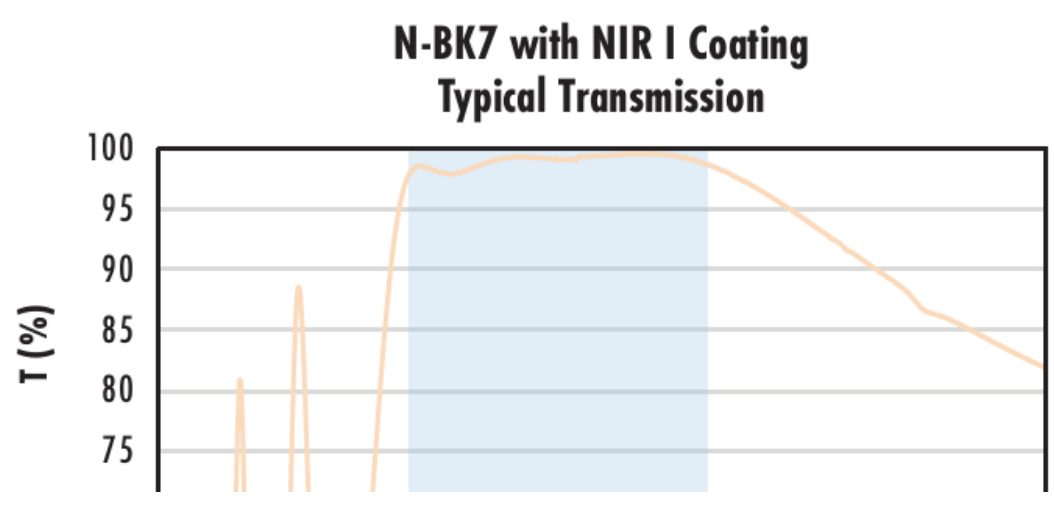

Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.

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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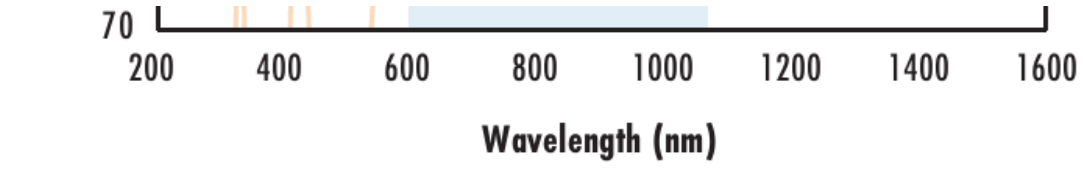

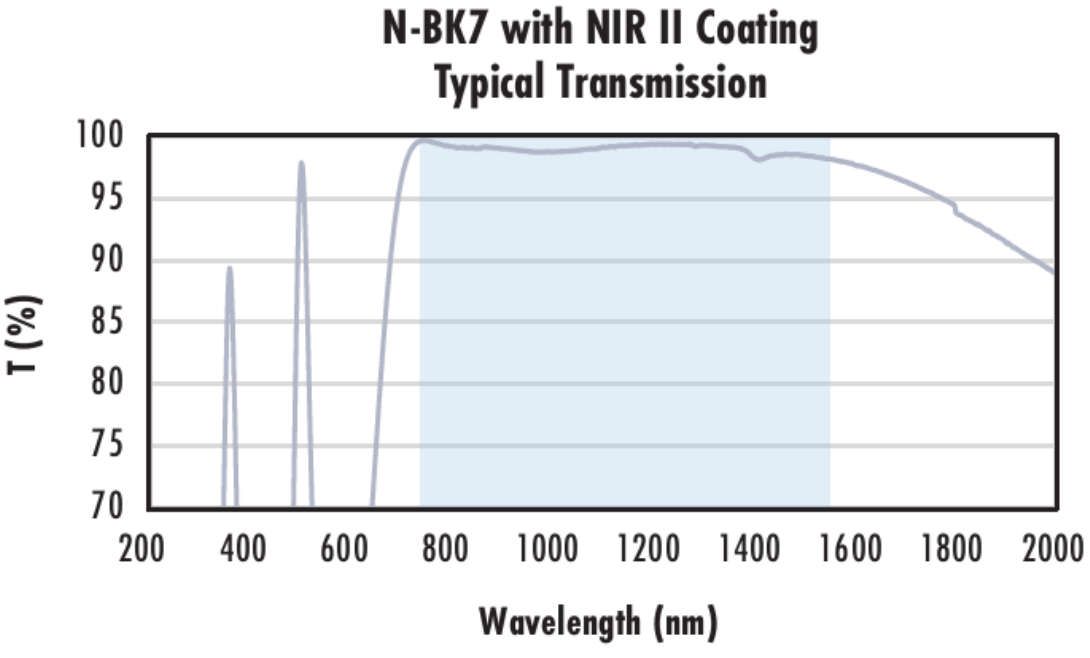

Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.

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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COATING CURVES

CUSTOM

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- Tight tolerances and complex geometries
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