See all 447 Products in Family

TECHSPEC® 125mm Dia., 8mm Thick, NIR II COated λ/4 N-BK7 Window

Stock **#29-592** CONTACT US

- 1 + **C$1,022**.00

ADD TO CART

Volume Pricing	
Qty 1-5	**C$1,022.00** each
Qty 6-25	**C$819.00** each
Qty 26-49	**C$763.00** each
Need More?	Request Quote

Product Downloads

General

Type:
Protective Window

Note:
Surface Flatness is specified per inch

Physical & Mechanical Properties

Clear Aperture CA (mm):
112.50

Diameter (mm):
125.00 +0.0/-0.25

Thickness (mm):
8.00 ±0.20

Parallelism (arcmin):
<1

Bevel:
Protective as needed

Clear Aperture (%):
90

Edges:
Fine Ground

Poisson's Ratio:
0.21

Young's Modulus (GPa):
82

Knoop Hardness (kg/mm^2):
610.00

Optical Properties

Coating:
NIR II (750-1550nm)

Substrate:
N-BK7

Index of Refraction (n_d):
1.516

Surface Quality:
60-40

Abbe Number (v_d):
64.17

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

Wavelength Range (nm):
750 - 1550

Surface Flatness (P-V):
λ/4

Damage Threshold, By Design:
8 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 253:
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

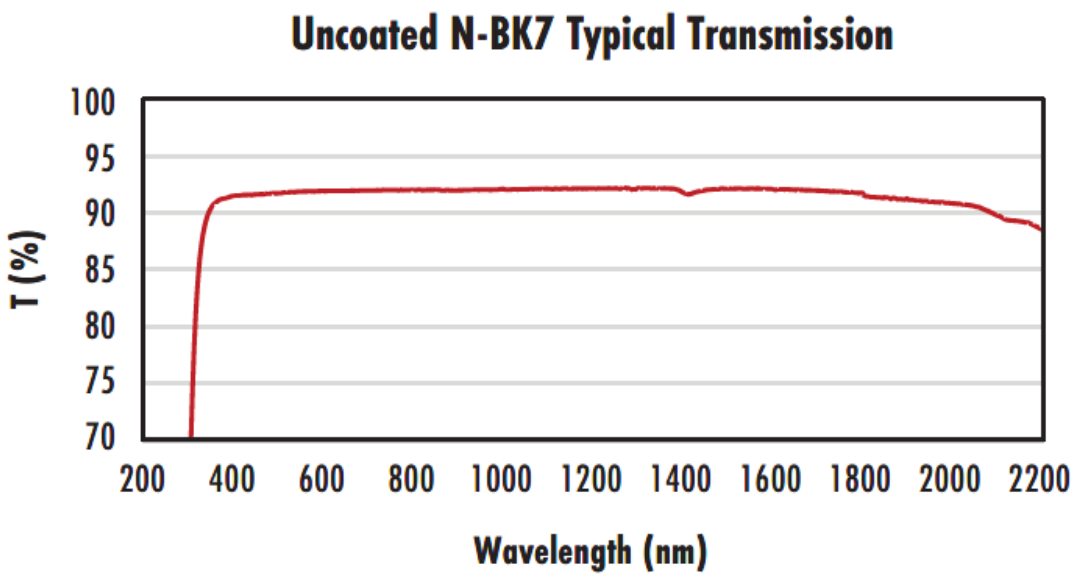
- Circular and Rectangular Sizes from 2mm to 200mm
- 8 Broadband Anti-Reflection Coating Options Available
- World's Largest Selection of Standard N-BK7 Windows
- Also Available with Ultra-Thin N-BK7 Windows

TECHSPEC® λ/4 N-BK7 Precision Windows are ideally suited for industrial and low-power laser applications. The high tolerance design yields minimal beam distortion and scatter. Broadband coating options extend the range of these precision windows through the visible and near-infrared spectra. TECHSPEC® λ/4 N-BK7 Precision Windows are offered in circular and rectangular sizes ranging from 2mm to 200mm.

Note: New additions to this product family may be specified with a transmitted wavefront distortion (TWD) specification instead of a surface flatness. For more information on the difference between these two specifications, see our application note on **Understanding Optical Windows**.

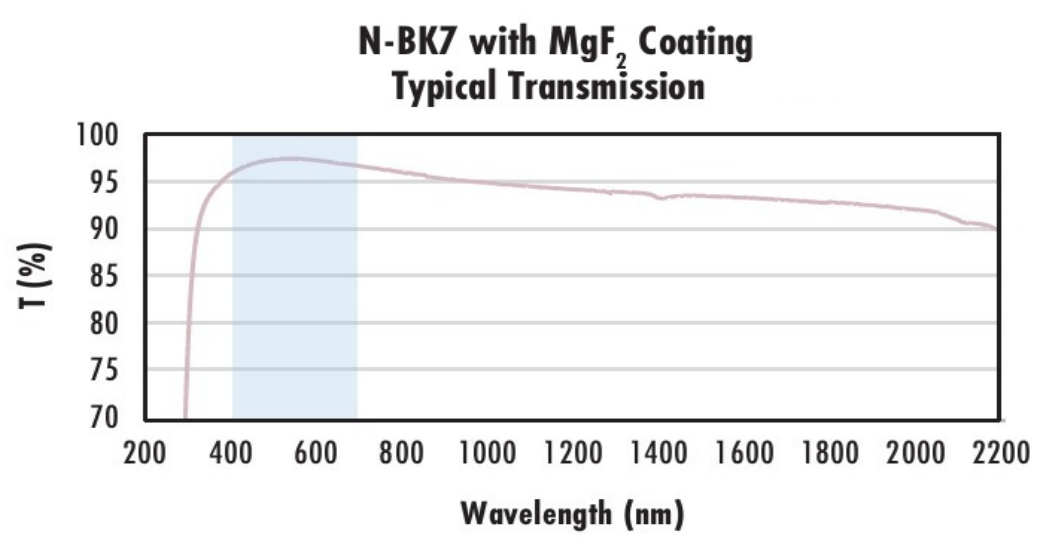
Technical Information

N-BK7



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

Click Here to Download Data



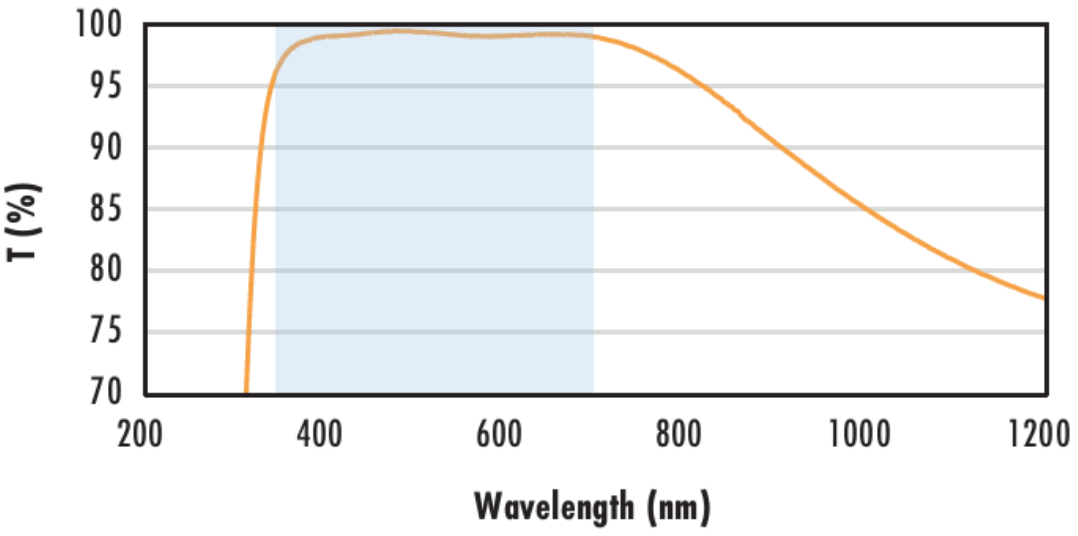
Typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) coating at 0° AOI.

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.

Click Here to Download Data



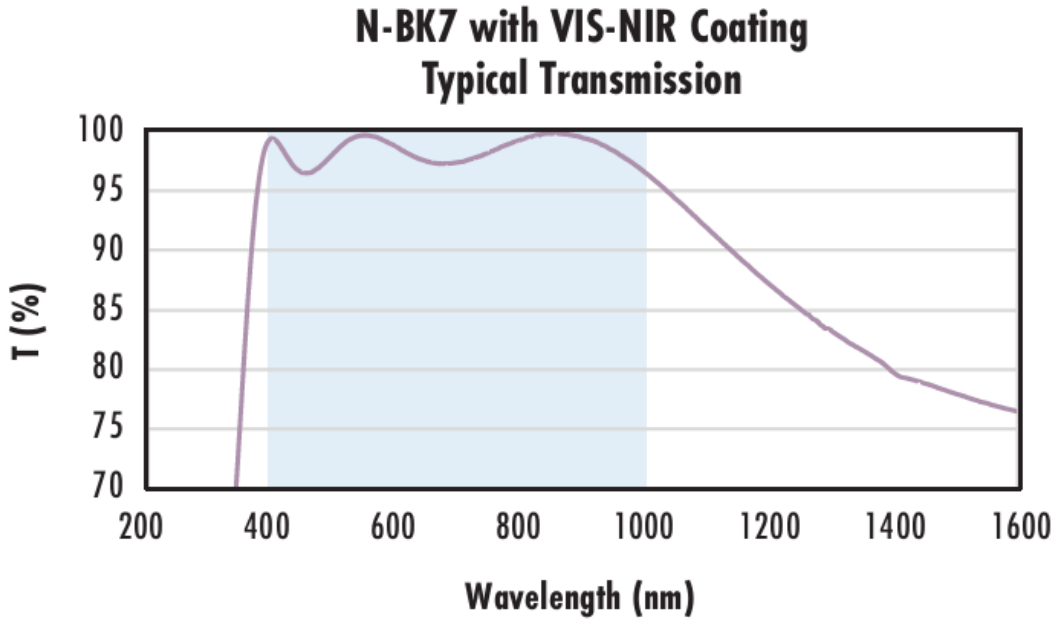
Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.

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.

Click Here to Download Data



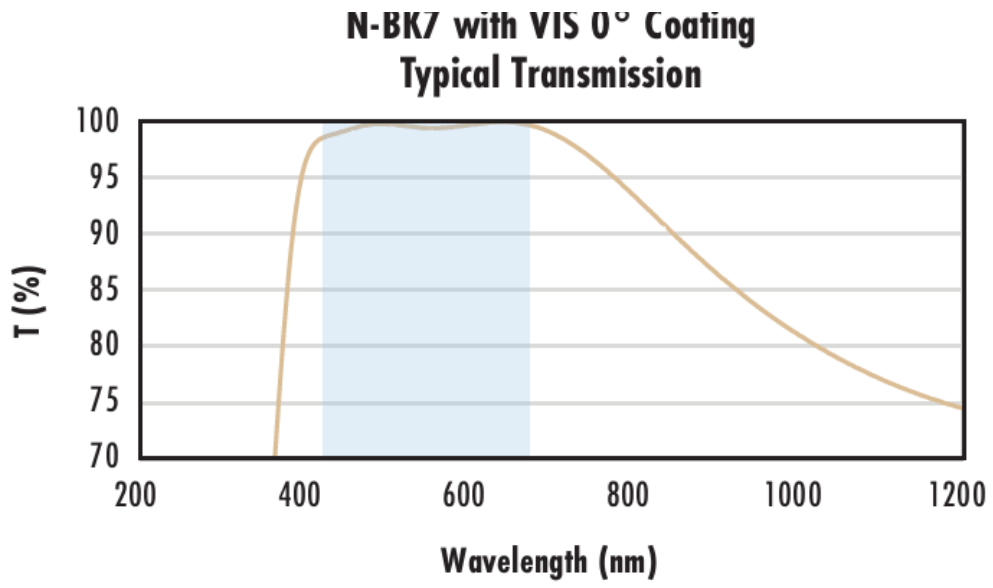
Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.

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.

Click Here to Download Data



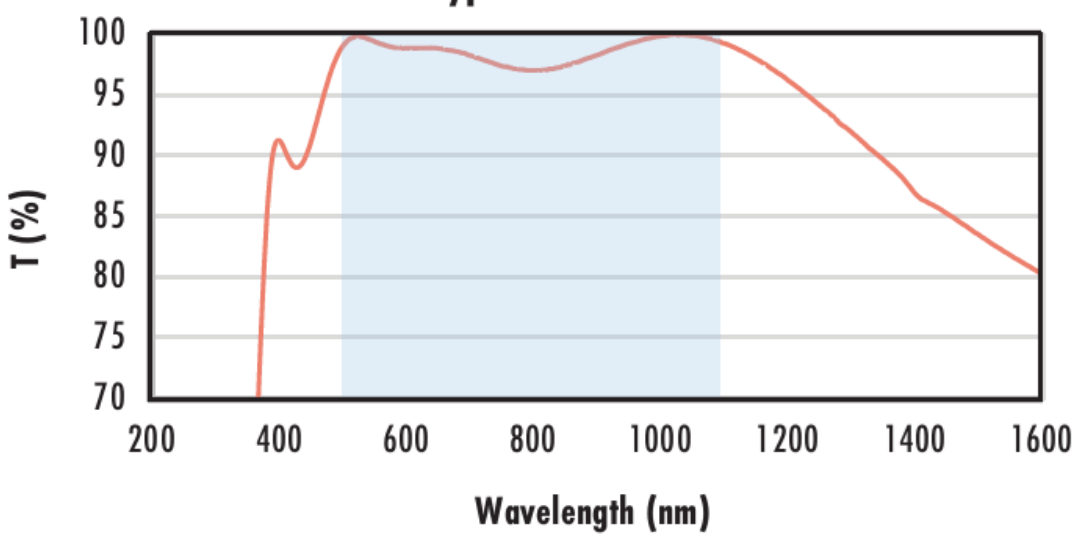
Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

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.

Click Here to Download Data



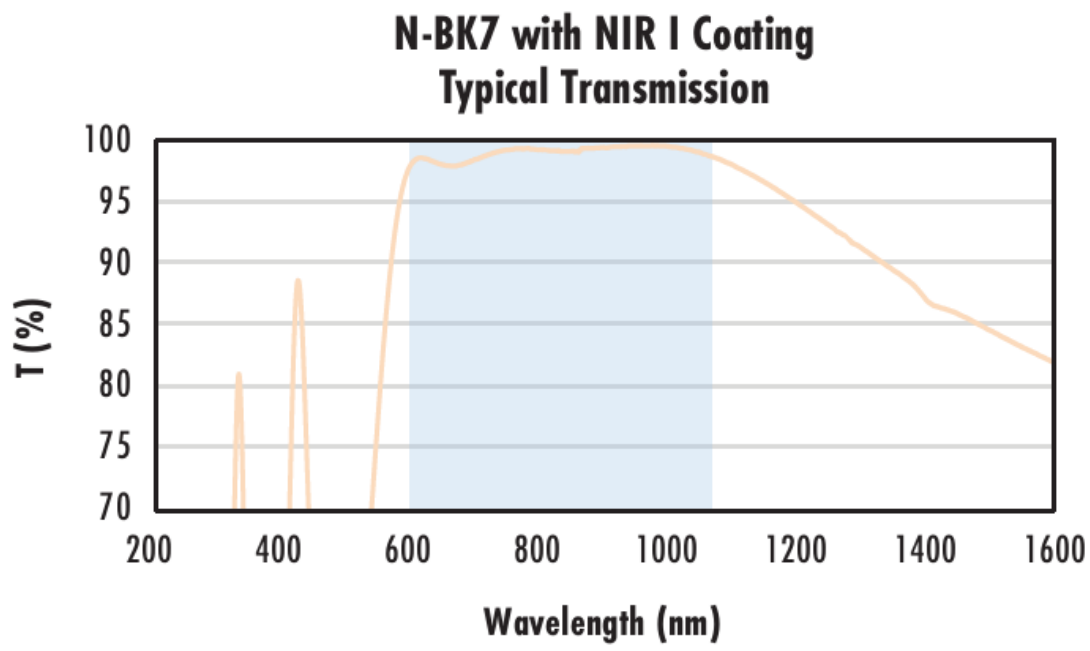
Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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.

Click Here to Download Data



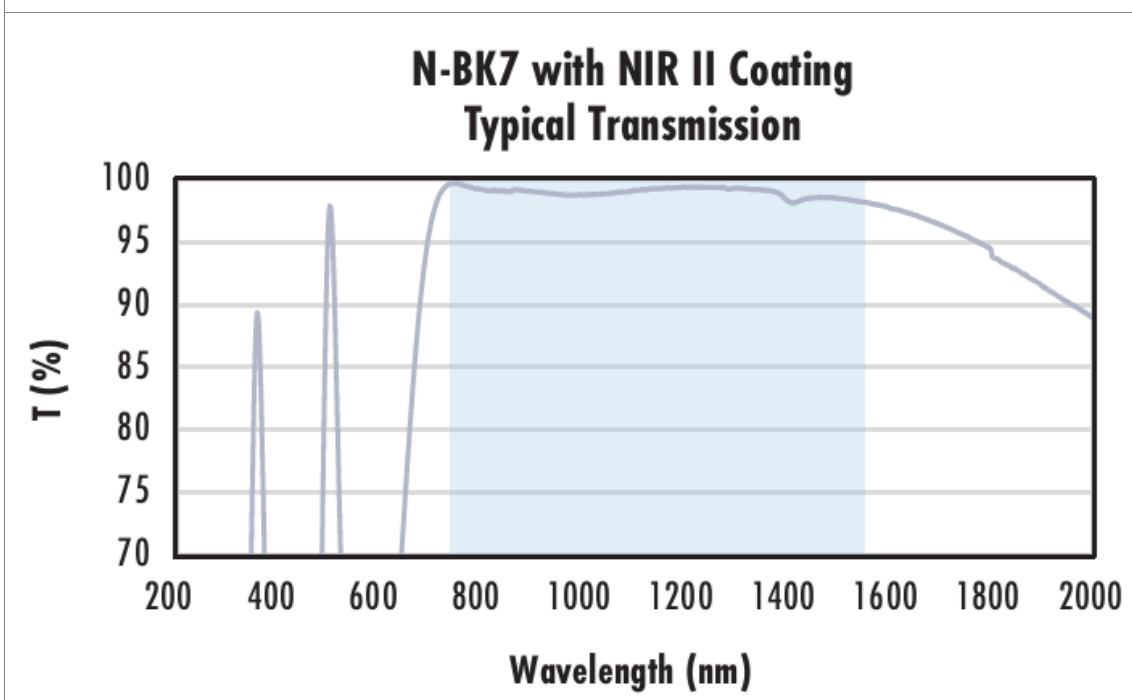
Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.

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.

Click Here to Download Data



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.

Click Here to Download Data

;