

TECHSPEC[®] 20mm Dia., 3mm Thick, MgF₂ Coated λ/4 N-BK7 Window



Stock **#45-578** 12 In Stock

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1

+

S\$127^{.40}

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Volume Pricing	
Qty 1-5	S\$127.40 each
Qty 6-25	S\$101.50 each
Qty 26-49	S\$96.60 each
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General

Protective Window	Type:
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Physical & Mechanical Properties

18.00	Clear Aperture CA (mm):
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20.00 +0.0/-0.25	Diameter (mm):
3.00 ±0.20	Thickness (mm):
<1	Parallelism (arcmin):
Protective as needed	Bevel:
90	Clear Aperture (%):
Fine Ground	Edges:
0.21	Poisson's Ratio:
82	Young's Modulus (GPa):
610.00	Knoop Hardness (kg/mm²):

Optical Properties	
MgF ₂ (400-700nm)	Coating:
N-BK7	Substrate: □
1.516	Index of Refraction (n _d):
60-40	Surface Quality:
64.17	Abbe Number (v _d):
R _{avg} ≤1.75% @ 400 - 700nm	Coating Specification:
400 - 700	Wavelength Range (nm):
λ/4	Surface Flatness (P-V):
10 J/cm² @ 532nm, 10ns	Damage Threshold, Reference:

Material Properties	
2.51	Density (g/cm³):
7.1 (-30 to +70°C) 8.3 (+20 to +300°C)	Coefficient of Thermal Expansion CTE (10 ⁻⁶ /°C):

Regulatory Compliance	
Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 235:

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





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

[Click Here to Download Data](#)



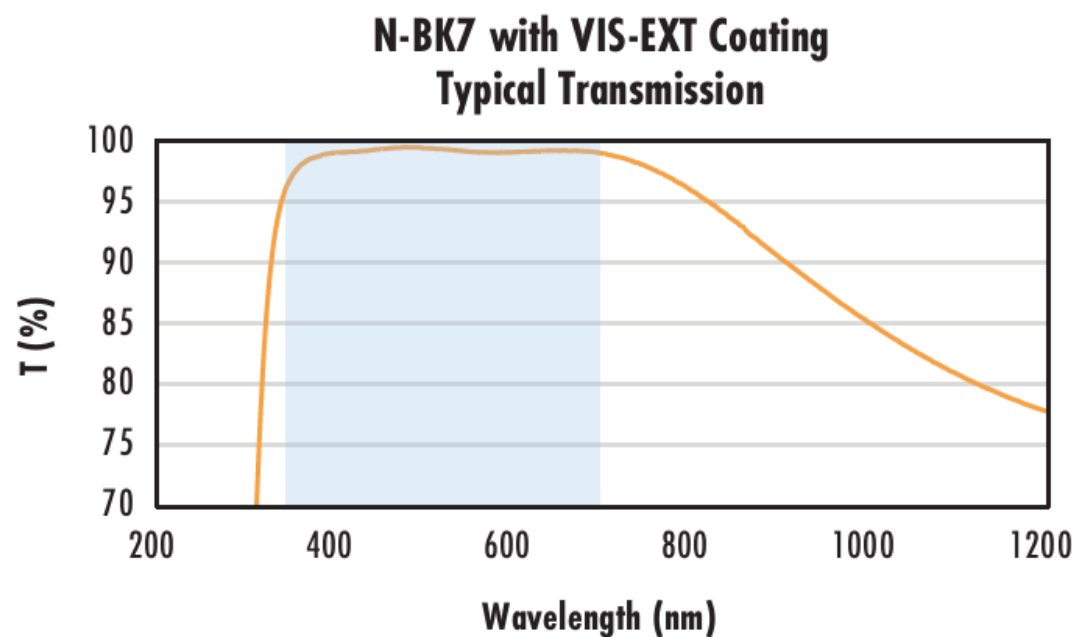
Typical transmission of a 3mm thick N-BK7 window with MgF₂ (400-700nm) coating at 0° AOI.

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

$R_{avg} \leq 1.75\% @ 400 - 700\text{nm}$ (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 wavelength range, with the following specification:

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

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 VIS-NIR (400-1000nm) coating at 0° AOI.

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

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

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 VIS 0° (425-675nm) coating at 0° AOI.

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

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

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

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