

TECHSPEC[®] 50mm N-BK7 Wedged Window

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-

1

+

C\$298²⁰

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Volume Pricing	
Qty 1-5	C\$298.20 each
Qty 6-25	C\$238.00 each
Qty 26-49	C\$224.00 each
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General	
Wedged Window	Type:
Physical & Mechanical Properties	
45.00	Clear Aperture CA (mm):
50.00 +0.0/-0.10	Diameter (mm):

3.00 ±0.20	Thickness (mm):
Fine Ground	Edges:
82	Young's Modulus (GPa):
30' ±10'	Wedge Angle (arcmin):

Optical Properties	
Uncoated	Coating:
1.516	Index of Refraction (n _d):
N-BK7	Substrate: ☐
λ/10 over 25mm Aperture	Surface Flatness (P-V):
20-10	Surface Quality:
350 - 2200	Wavelength Range (nm):

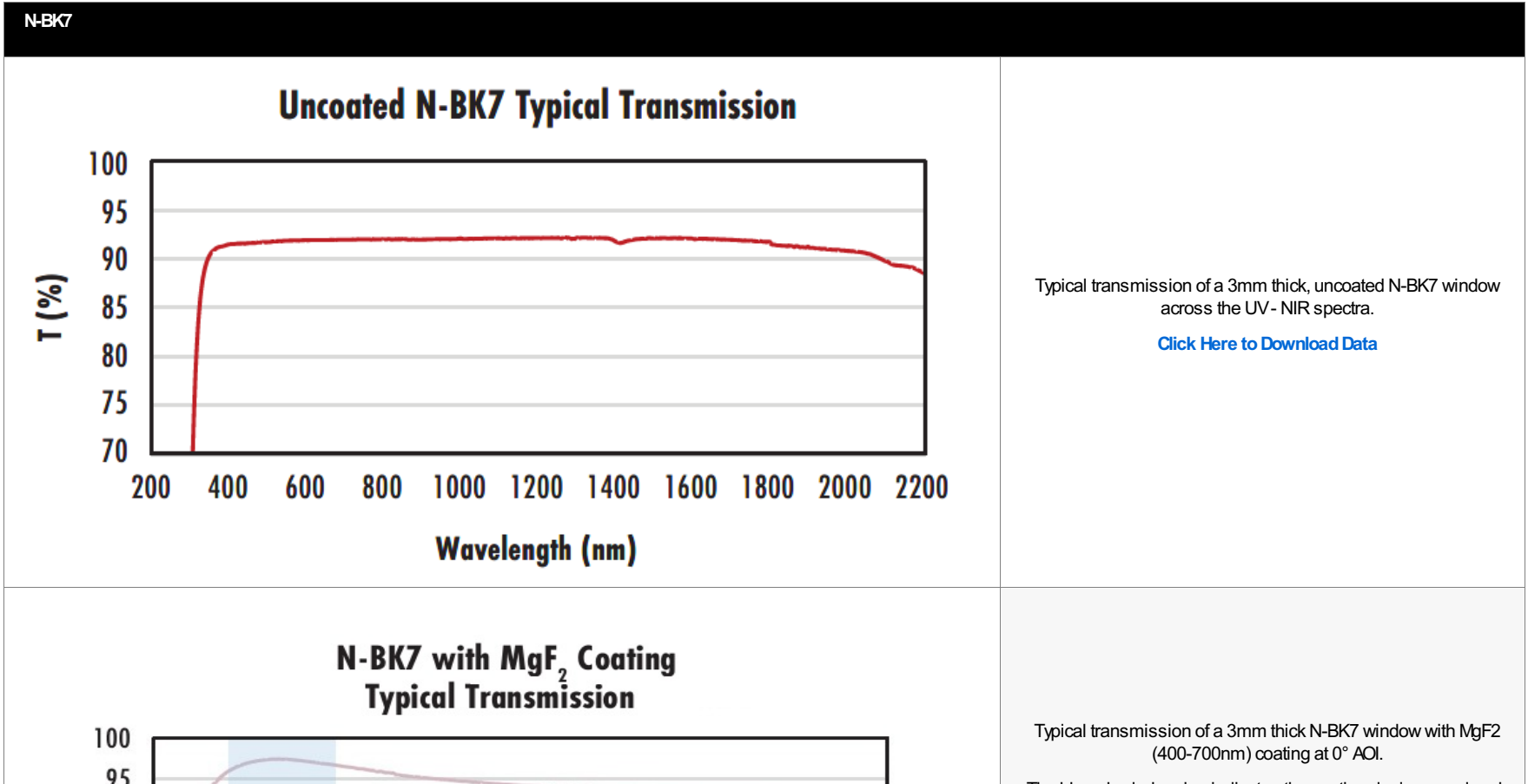
Material Properties	
Coefficient of Thermal Expansion CTE (10 ⁻⁶ /°C): 7.1 (-30 to +70°C) 8.3 (+20 to +300°C)	

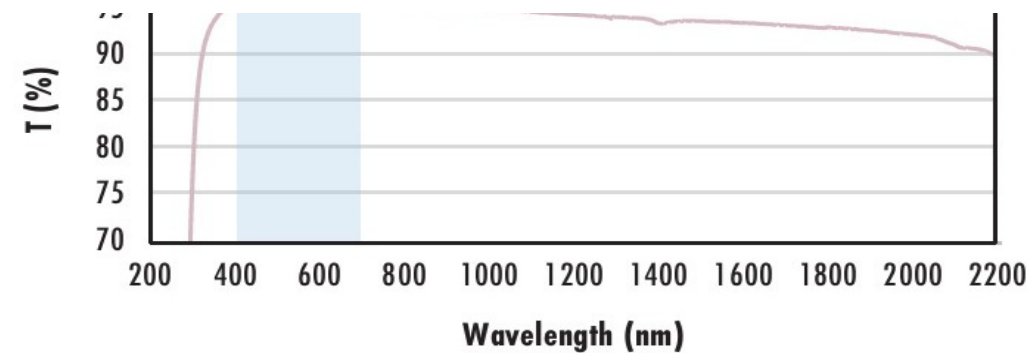
Regulatory Compliance	
Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 247:

Product Details

- N-BK7 Substrates with a 30 Arcminute Wedge
 - λ/10 Surface Flatness and 20-10 Surface Quality
 - Ideal for Eliminating Etalon Effects
 - Fused Silica Wedged Windows and N-BK7 Flat Windows Also Available
- TECHSPEC® N-BK7 Wedged Windows are available in standard metric sizes with a 30 arcminute wedge. The wedge of these windows eliminate Etalon effects by preventing back surface reflections from traveling along the same optical path as the transmitted beam. In laser cavities, wedged windows help prevent laser instability, mode-hopping, and power spikes caused by these unwanted reflections. TECHSPEC N-BK7 Wedged Windows are often used as a cost-effective alternative to Fused Silica Wedged Windows in applications that do not require UV transmission or where high thermal stability is not required such as with low power visible or NIR lasers. Wedged windows can also be used as beam samplers or beam pick-off optics to monitor laser beam properties such as beam power over time.

Technical Information



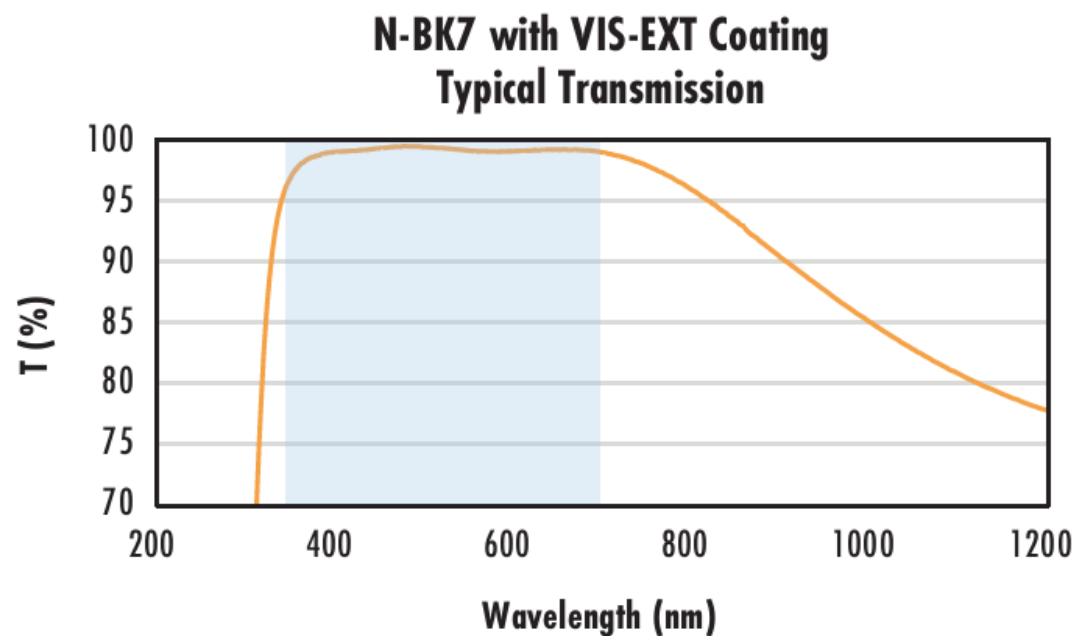


The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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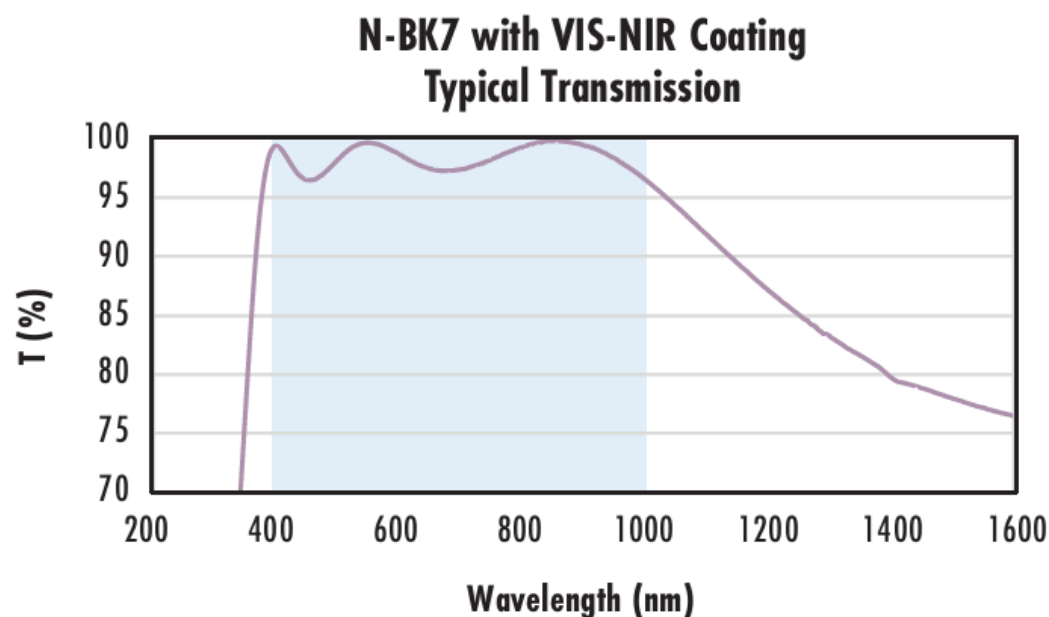
Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.

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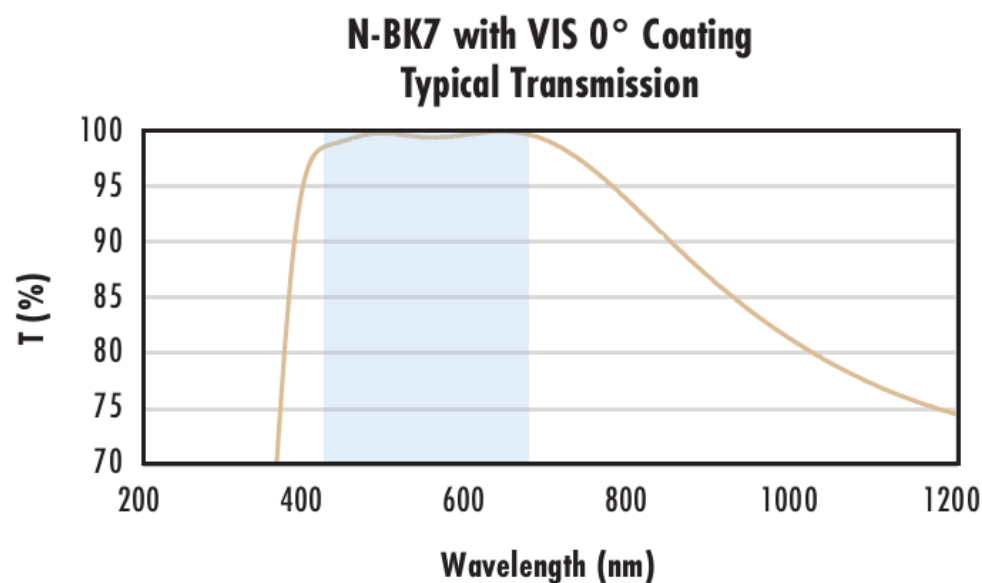
Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.

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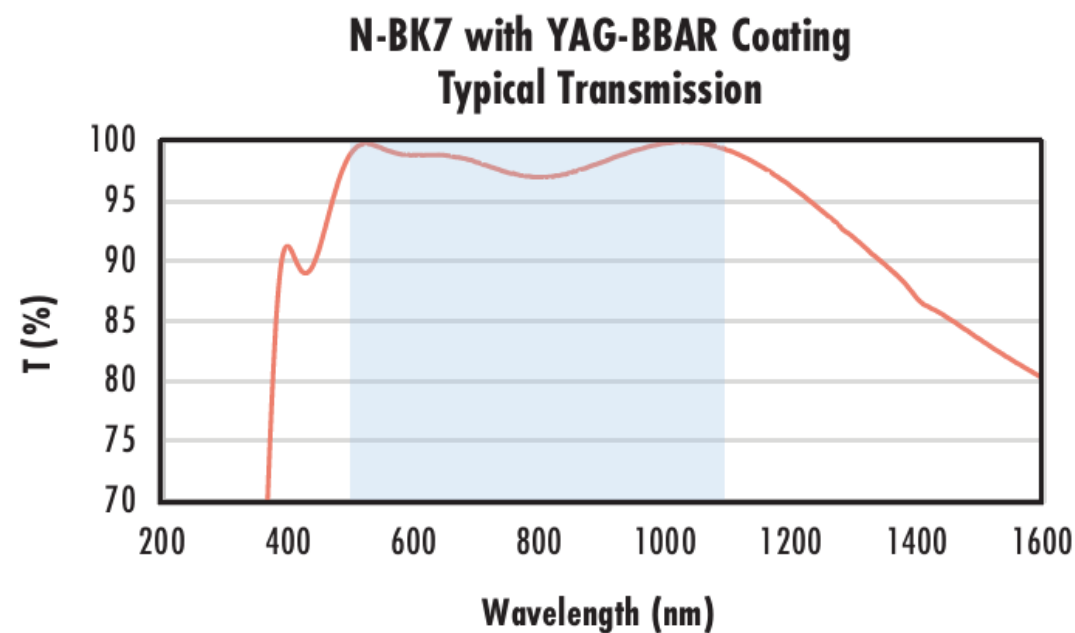
Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

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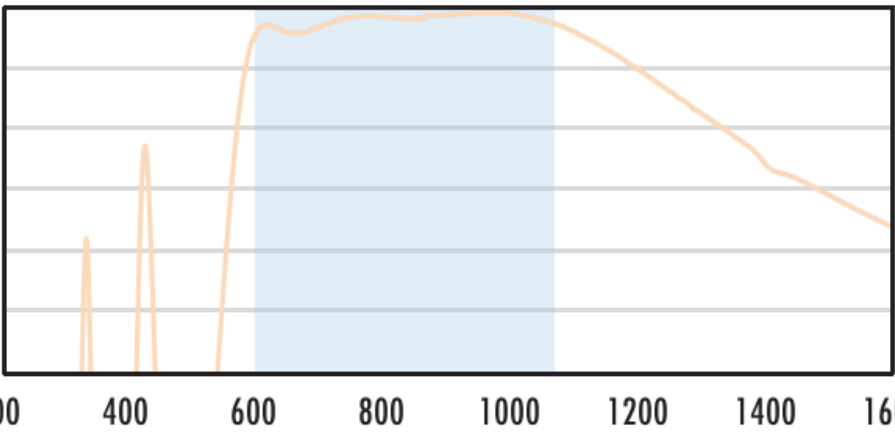
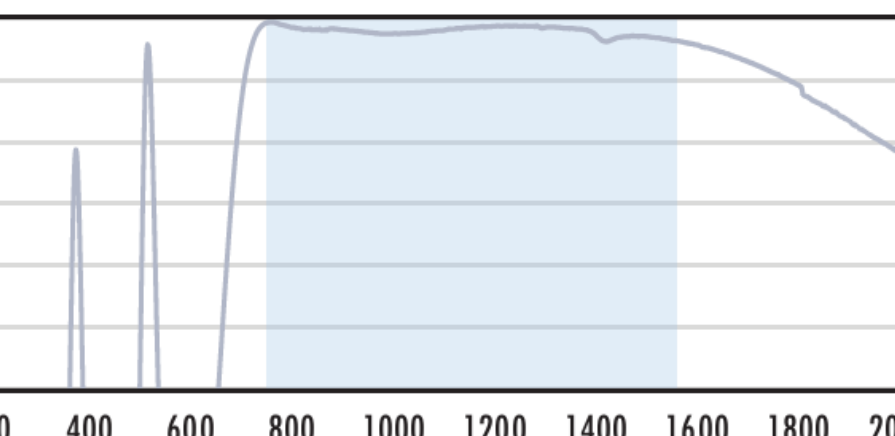
Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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

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

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

[Click Here to Download Data](#)

N-BK7 with NIR I Coating Typical Transmission <table border="1"><caption>Approximate data for NIR I Coating</caption><thead><tr><th>Wavelength (nm)</th><th>Transmission T (%)</th></tr></thead><tbody><tr><td>200</td><td>70</td></tr><tr><td>300</td><td>70</td></tr><tr><td>350</td><td>80</td></tr><tr><td>400</td><td>70</td></tr><tr><td>450</td><td>88</td></tr><tr><td>500</td><td>70</td></tr><tr><td>600</td><td>98</td></tr><tr><td>800</td><td>99</td></tr><tr><td>1000</td><td>99</td></tr><tr><td>1050</td><td>98</td></tr><tr><td>1200</td><td>95</td></tr><tr><td>1400</td><td>87</td></tr><tr><td>1600</td><td>82</td></tr></tbody></table>	Wavelength (nm)	Transmission T (%)	200	70	300	70	350	80	400	70	450	88	500	70	600	98	800	99	1000	99	1050	98	1200	95	1400	87	1600	82	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 wavelength 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		
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N-BK7 with NIR II Coating Typical Transmission <table border="1"><caption>Approximate data for NIR II Coating</caption><thead><tr><th>Wavelength (nm)</th><th>Transmission T (%)</th></tr></thead><tbody><tr><td>200</td><td>70</td></tr><tr><td>300</td><td>70</td></tr><tr><td>350</td><td>88</td></tr><tr><td>400</td><td>70</td></tr><tr><td>450</td><td>98</td></tr><tr><td>500</td><td>70</td></tr><tr><td>600</td><td>70</td></tr><tr><td>750</td><td>99</td></tr><tr><td>1000</td><td>99</td></tr><tr><td>1200</td><td>99</td></tr><tr><td>1400</td><td>98</td></tr><tr><td>1550</td><td>98</td></tr><tr><td>1800</td><td>94</td></tr><tr><td>2000</td><td>89</td></tr></tbody></table>	Wavelength (nm)	Transmission T (%)	200	70	300	70	350	88	400	70	450	98	500	70	600	70	750	99	1000	99	1200	99	1400	98	1550	98	1800	94	2000	89	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 wavelength 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
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