

TECHSPEC<sup>®</sup> 50mm Dia., 6mm Thick, YAG-BBAR Coated,  $\lambda$ /4 N-BK7 Window



Stock **#13-328** 9 In Stock

-

1

+

A\$244<sup>.80</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | A\$244.80 each                |
| Qty 6-25       | A\$195.20 each                |
| Qty 26-49      | A\$182.40 each                |
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Product Downloads

|        |           |
|--------|-----------|
| 358.00 | #Sorting: |
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General

|                   |       |
|-------------------|-------|
| Protective Window | Type: |
|-------------------|-------|

Physical & Mechanical Properties

|       |                         |
|-------|-------------------------|
| 45.00 | Clear Aperture CA (mm): |
|-------|-------------------------|

|                      |                          |
|----------------------|--------------------------|
| 50.00 +0.0/-0.25     | Diameter (mm):           |
| 6.00 ±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                                                                                           |                                        |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------|
| YAG-BBAR (500-1100nm)                                                                                        | Coating:                               |
| N-BK7                                                                                                        | Substrate: □                           |
| 1.516                                                                                                        | Index of Refraction (n <sub>d</sub> ): |
| 60-40                                                                                                        | Surface Quality:                       |
| 64.17                                                                                                        | Abbe Number (v <sub>d</sub> ):         |
| R <sub>abs</sub> <0.25% @ 532nm<br>R <sub>abs</sub> <0.25% @ 1064nm<br>R <sub>avg</sub> <1.0% @ 500 - 1100nm | Coating Specification:                 |
| 500 - 1100                                                                                                   | Wavelength Range (nm):                 |
| λ/4                                                                                                          | Surface Flatness (P-V):                |
| 5 J/cm² @ 532nm, 10ns                                                                                        | Damage Threshold, By Design:           |

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

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

## Product Details

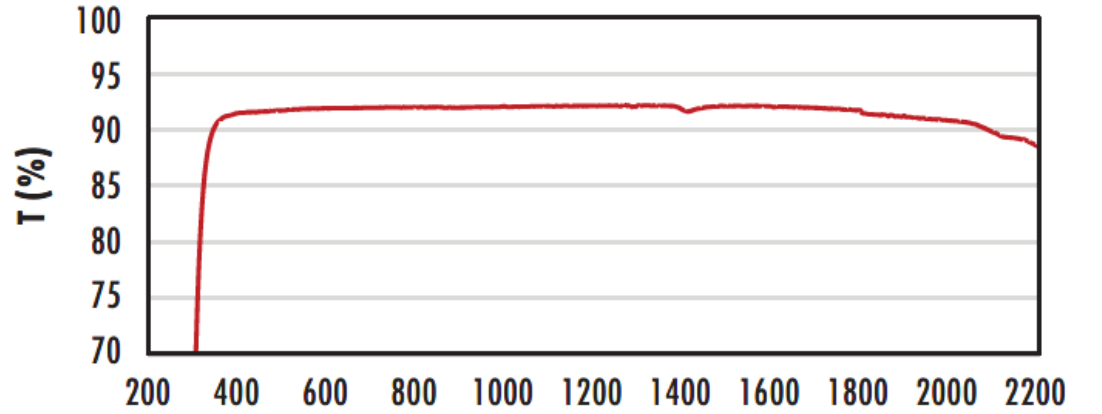
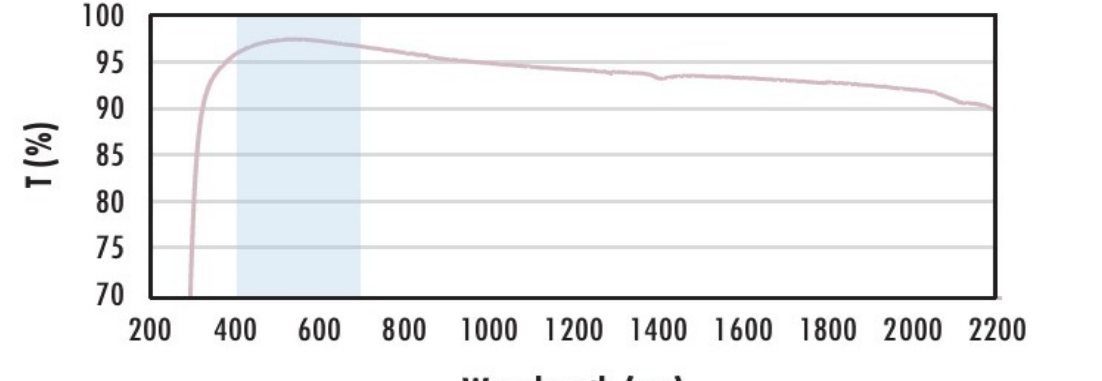
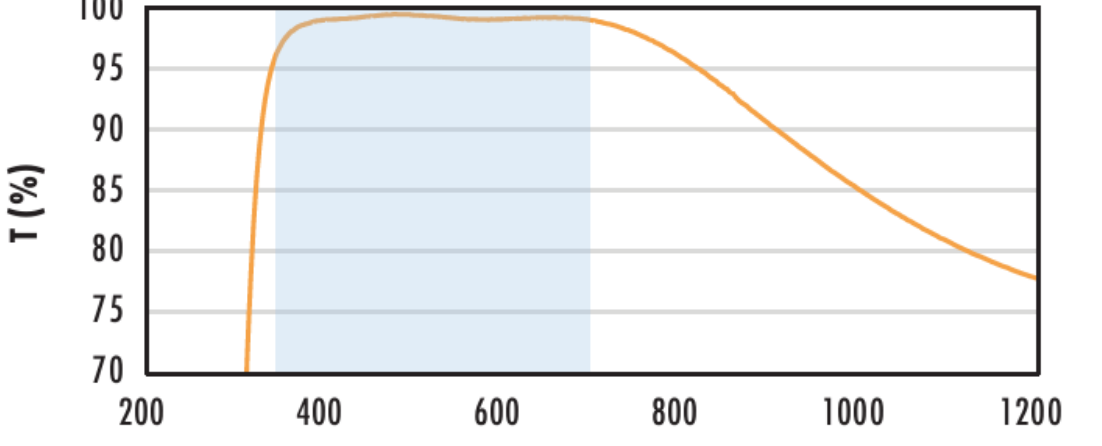
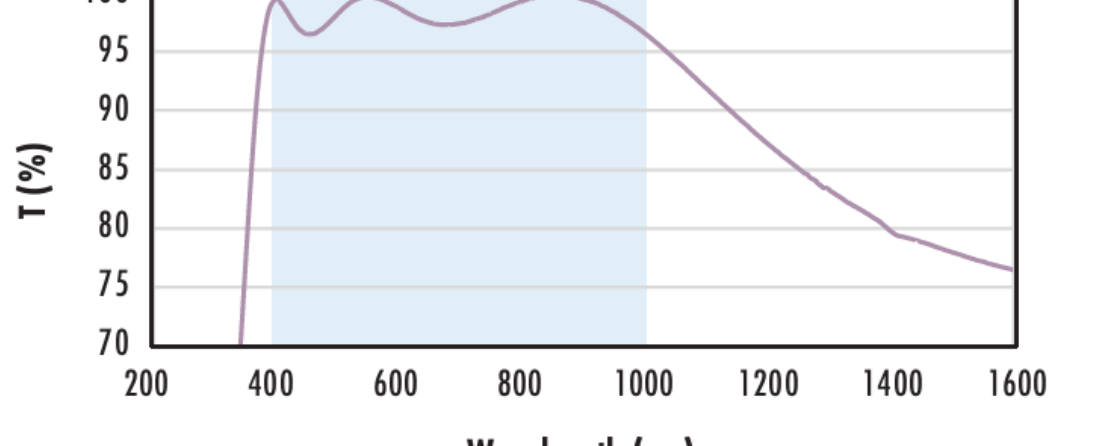
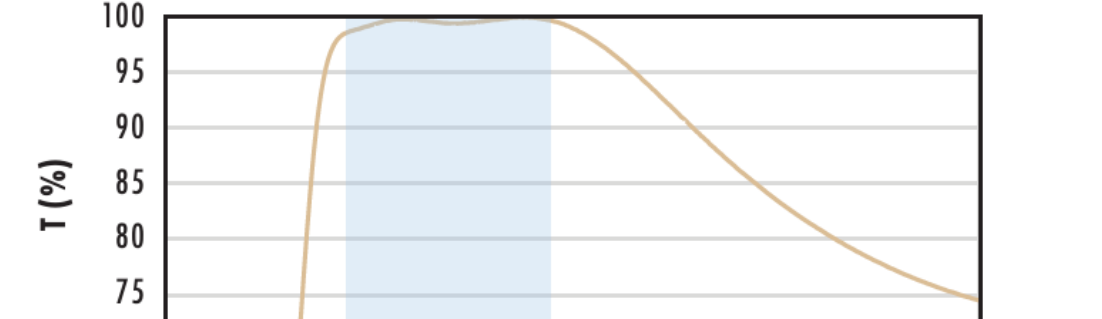
- Circular and Rectangular Sizes from 2mm to 200mm
- 8 Broadband Anti-Reflection Coating Options Available
- World's Largest Selection of Standard N-BK7 Windows
- Also Available with [Ultra-Thin N-BK7 Windows](#)

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

N-BK7

|                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div data-bbox="252 74 1281 593"><h3>Uncoated N-BK7 Typical Transmission</h3></div>                        | <div data-bbox="1323 267 1848 385"><p>Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.</p><p><a href="#">Click Here to Download Data</a></p></div>                                                                                                                                                                                                                                                                                                                                                                                                        |
| <div data-bbox="252 626 1281 1157"><h3>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</h3></div> | <div data-bbox="1323 742 1848 1023"><p>Typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) coating at 0° AOI.</p><p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p><p><math>R_{avg} \leq 1.75\% \text{ @ } 400 - 700\text{nm (N-BK7)}</math></p><p>Data outside this range is not guaranteed and is for reference only.</p><p><a href="#">Click Here to Download Data</a></p></div>                                                                                                                               |
| <div data-bbox="252 1178 1281 1795"><h3>N-BK7 with VIS-EXT Coating Typical Transmission</h3></div>       | <div data-bbox="1323 1335 1848 1617"><p>Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.</p><p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p><p><math>R_{avg} \leq 0.5\% \text{ @ } 350 - 700\text{nm}</math></p><p>Data outside this range is not guaranteed and is for reference only.</p><p><a href="#">Click Here to Download Data</a></p></div>                                                                                                                                    |
| <div data-bbox="252 1816 1281 2404"><h3>N-BK7 with VIS-NIR Coating Typical Transmission</h3></div>       | <div data-bbox="1323 1929 1848 2270"><p>Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.</p><p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p><p><math>R_{abs} \leq 0.25\% \text{ @ } 880\text{nm}</math><br/><math>R_{avg} \leq 1.25\% \text{ @ } 400 - 870\text{nm}</math><br/><math>R_{avg} \leq 1.25\% \text{ @ } 890 - 1000\text{nm}</math></p><p>Data outside this range is not guaranteed and is for reference only.</p><p><a href="#">Click Here to Download Data</a></p></div> |
| <div data-bbox="252 2424 1281 2878"><h3>N-BK7 with VIS 0° Coating Typical Transmission</h3></div>        | <div data-bbox="1323 2552 1848 2834"><p>Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.</p><p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p><p><math>R_{avg} \leq 0.4\% \text{ @ } 425 - 675\text{nm}</math></p><p>Data outside this range is not guaranteed and is for reference only.</p><p><a href="#">Click Here to Download Data</a></p></div>                                                                                                                                     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>20040060080010001200</div> <div>Wavelength (nm)</div>                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <div><div>N-BK7 with YAG-BBAR Coating</div><div>Typical Transmission</div><div><div><div><div>T (%)</div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div><div>1400</div><div>1600</div></div><div>Wavelength (nm)</div></div></div><div></div></div></div></div>                             |  | <div>Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><div><div><math>R_{abs} \leq 0.25\%</math> @ 532nm</div><div><math>R_{abs} \leq 0.25\%</math> @ 1064nm</div><div><math>R_{avg} \leq 1.0\%</math> @ 500 - 1100nm</div></div></div> <div>Data outside this range is not guaranteed and is for reference only.</div> <div><a href="#">Click Here to Download Data</a></div>           |
| <div><div>N-BK7 with NIR I Coating</div><div>Typical Transmission</div><div><div><div><div>T (%)</div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div><div>1400</div><div>1600</div></div><div>Wavelength (nm)</div></div></div><div></div></div></div></div>                                |  | <div>Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><div><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</div></div> <div>Data outside this range is not guaranteed and is for reference only.</div> <div><a href="#">Click Here to Download Data</a></div>                                                                                                                              |
| <div><div>N-BK7 with NIR II Coating</div><div>Typical Transmission</div><div><div><div><div>T (%)</div><div>100</div><div>95</div><div>90</div><div>85</div><div>80</div><div>75</div><div>70</div></div><div><div><div><div>200</div><div>400</div><div>600</div><div>800</div><div>1000</div><div>1200</div><div>1400</div><div>1600</div><div>1800</div><div>2000</div></div><div>Wavelength (nm)</div></div></div><div></div></div></div></div> |  | <div>Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.</div> <div>The blue shaded region indicates the coating design wavelength range, with the following specification:</div> <div><div><div><math>R_{abs} \leq 1.5\%</math> @ 750 - 800nm</div><div><math>R_{abs} \leq 1.0\%</math> @ 800 - 1550nm</div><div><math>R_{avg} \leq 0.7\%</math> @ 750 - 1550nm</div></div></div> <div>Data outside this range is not guaranteed and is for reference only.</div> <div><a href="#">Click Here to Download Data</a></div> |

## Custom

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](#).

## Compatible Mounts