

TECHSPEC<sup>®</sup> 30mm Dia. x 50mm FL VIS-EXT Coated, Double-Convex Lens



Stock **#89-188** 1 In Stock

☐ [Other Coating Options](#)

-

1

+

C\$90<sup>.72</sup>

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| Qty 1-9        | C\$90.72 each                 |
| Qty 10-24      | C\$81.65 each                 |
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SPECIFICATIONS

General

Type:

|                                      |                                             |
|--------------------------------------|---------------------------------------------|
| Double-Convex Lens                   |                                             |
| Physical & Mechanical Properties     |                                             |
| 30.00 +0.000/-0.025                  | Diameter (mm):                              |
| <1                                   | Centering (arcmin):                         |
| Protective as needed                 | Bevel:                                      |
| 6.55                                 | Center Thickness CT (mm):                   |
| ±0.10                                | Center Thickness Tolerance (mm):            |
| 2.00                                 | Edge Thickness ET (mm):                     |
| 29.00                                | Clear Aperture CA (mm):                     |
| Optical Properties                   |                                             |
| 47.82                                | Back Focal Length BFL (mm):                 |
| 50.00                                | Effective Focal Length EFL (mm):            |
| VIS-EXT (350-700nm)                  | Coating:                                    |
| R <sub>avg</sub> <0.5% @ 350 - 700nm | Coating Specification:                      |
| N-BK7                                | Substrate: <input type="checkbox"/>         |
| 40-20                                | Surface Quality:                            |
| 1.5λ                                 | Power (P-V) @ 632.8nm:                      |
| λ/4                                  | Irregularity (P-V) @ 632.8nm:               |
| 50.56                                | Radius R <sub>1</sub> =R <sub>2</sub> (mm): |
| 1.67                                 | f/#:                                        |
| 587.6                                | Focal Length Specification Wavelength (nm): |
| ±1                                   | Focal Length Tolerance (%):                 |
| 0.30                                 | Numerical Aperture NA:                      |
| 350 - 700                            | Wavelength Range (nm):                      |
| Regulatory Compliance                |                                             |
| Compliant                            | RoHS 2015:                                  |
| View                                 | Certificate of Conformance:                 |
| Compliant                            | Reach 235:                                  |

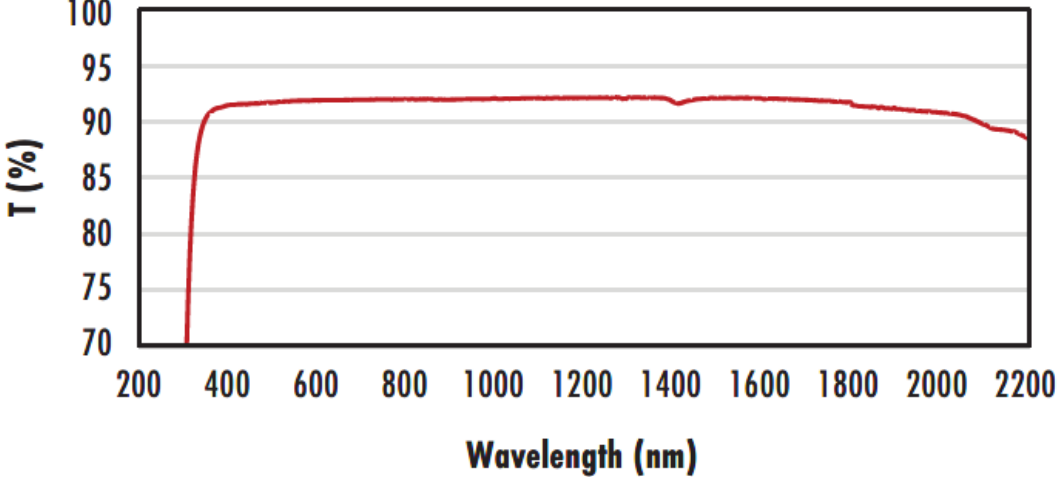
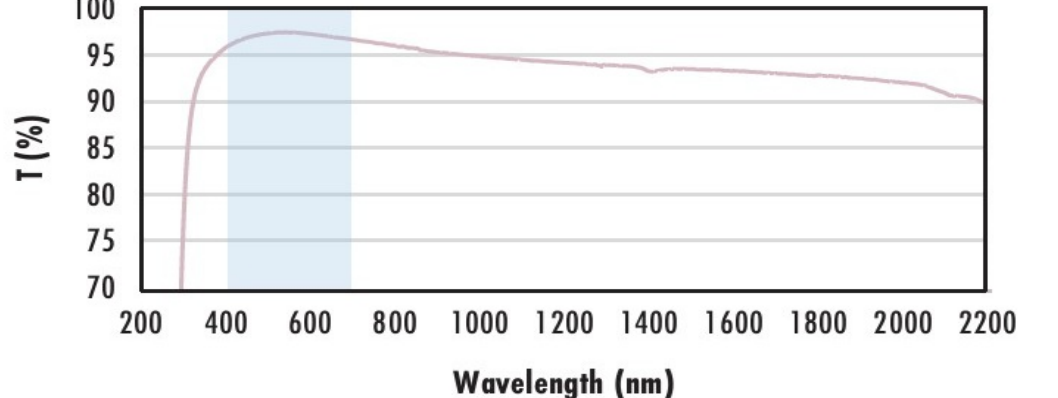
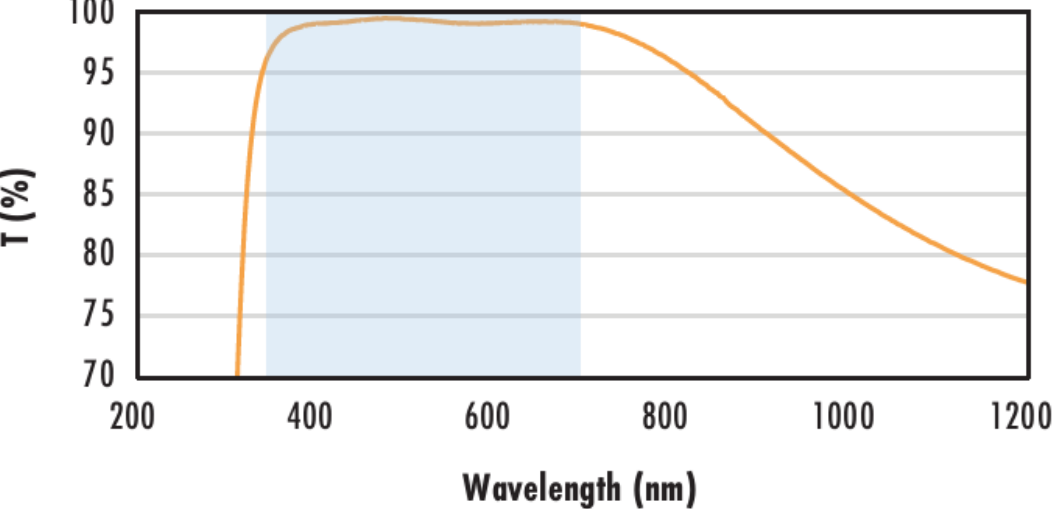
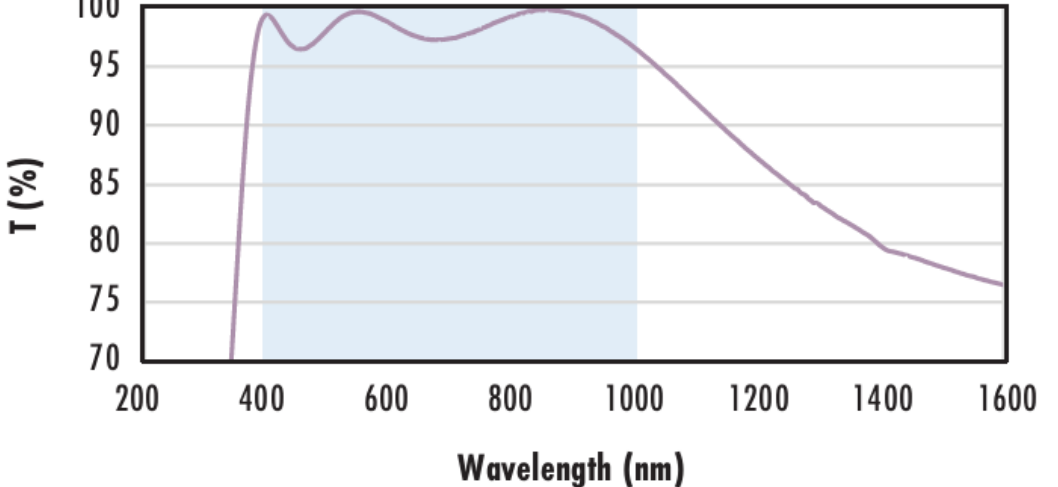
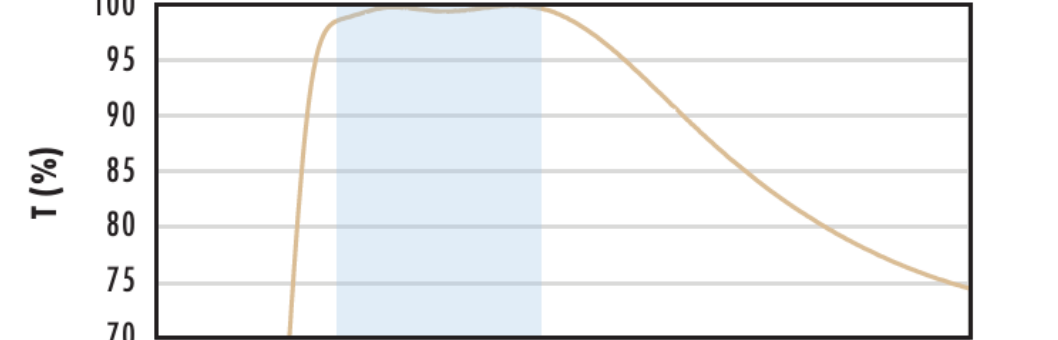
## PRODUCT DETAILS

- AR Coated to Provide <0.5% Reflectance per Surface for 350 - 700nm
- Mnimize Aberrations Including Spherical and Coma
- [UV Fused Silica DCX Lenses](#) Available
- Other Coating Options Available: [Uncoated](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [NIR I](#), [NIR II](#), [VIS-NIR](#), and [YAG-BBAR](#)

TECHSPEC® VIS-EXT Coated Double-Convex (DCX) Lenses, also referred to as bi-convex lenses, have two positive, symmetrical faces with equal radii on both sides. These lenses are generally recommended for finite imaging applications with a conjugate ratio (ratio between object distance and image distance) between 0.2 and 5. At a conjugate ratio of 1, aberrations such as spherical aberration, chromatic aberration, coma, and distortion are minimized or cancelled due to the symmetric lens design. TECHSPEC VIS-EXT Coated Double-Convex Lenses are available in a variety of substrates and coating options for the visible and NIR spectra.

## TECHNICAL INFORMATION

N-BK7

|                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p data-bbox="527 71 1085 121"><b>Uncoated N-BK7 Typical Transmission</b></p>                       | <p data-bbox="1339 278 1839 329">Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.</p> <p data-bbox="1472 344 1707 365"><a href="#">Click Here to Download Data</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p data-bbox="590 676 957 756"><b>N-BK7 with MgF<sub>2</sub> Coating Typical Transmission</b></p>  | <p data-bbox="1339 759 1839 810">Typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) coating at 0° AOI.</p> <p data-bbox="1331 825 1848 875">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1436 884 1743 914"><math>R_{avg} \leq 1.75\% @ 400 - 700\text{nm (N-BK7)}</math></p> <p data-bbox="1339 923 1839 973">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 988 1707 1009"><a href="#">Click Here to Download Data</a></p>                                                                                                                     |
| <p data-bbox="590 1190 1016 1282"><b>N-BK7 with VIS-EXT Coating Typical Transmission</b></p>      | <p data-bbox="1331 1359 1848 1409">Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.</p> <p data-bbox="1331 1424 1848 1475">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1478 1484 1701 1513"><math>R_{avg} \leq 0.5\% @ 350 - 700\text{nm}</math></p> <p data-bbox="1339 1522 1839 1573">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 1587 1707 1608"><a href="#">Click Here to Download Data</a></p>                                                                                                                  |
| <p data-bbox="590 1834 1005 1926"><b>N-BK7 with VIS-NIR Coating Typical Transmission</b></p>      | <p data-bbox="1331 1952 1848 2003">Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.</p> <p data-bbox="1331 2018 1848 2068">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1465 2077 1709 2148"><math>R_{abs} \leq 0.25\% @ 880\text{nm}</math><br/><math>R_{avg} \leq 1.25\% @ 400 - 870\text{nm}</math><br/><math>R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}</math></p> <p data-bbox="1339 2187 1839 2237">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 2246 1707 2267"><a href="#">Click Here to Download Data</a></p> |
| <p data-bbox="596 2457 976 2546"><b>N-BK7 with VIS 0° Coating Typical Transmission</b></p>        | <p data-bbox="1339 2591 1839 2641">Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.</p> <p data-bbox="1331 2656 1848 2706">The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p data-bbox="1478 2715 1701 2745"><math>R_{avg} \leq 0.4\% @ 425 - 675\text{nm}</math></p> <p data-bbox="1339 2754 1839 2804">Data outside this range is not guaranteed and is for reference only.</p> <p data-bbox="1472 2813 1707 2834"><a href="#">Click Here to Download Data</a></p>                                                                                                                   |

|                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>20040060080010001200</div> <div>Wavelength (nm)</div>                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <div><div><div>N-BK7 with YAG-BBAR Coating</div><div>Typical Transmission</div></div><div><div><div>T (%)</div><div>100959085807570</div></div><div><div><div>2004006008001000120014001600</div><div>Wavelength (nm)</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><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>           |
| <div><div><div>N-BK7 with NIR I Coating</div><div>Typical Transmission</div></div><div><div><div>T (%)</div><div>100959085807570</div></div><div><div><div>2004006008001000120014001600</div><div>Wavelength (nm)</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><math>R_{avg} \leq 0.5\%</math> @ 600 - 1050nm</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><div><div>N-BK7 with NIR II Coating</div><div>Typical Transmission</div></div><div><div><div>T (%)</div><div>100959085807570</div></div><div><div><div>200400600800100012001400160018002000</div><div>Wavelength (nm)</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><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></div></div> |

COMPATIBLE MOUNTS