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**TECHSPEC® 12mm Dia. x 48mm FL VIS-EXT, Inked, Double-Convex Lens**



Stock **#89-155-INK** [CONTACT US](#)

[Other Coating Options](#)

− 1 + £49<sup>00</sup>

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Volume Pricing	
Qty 1-9	£49.60 each
Qty 10-24	£44.80 each
Qty 25-99	£39.80 each
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ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

**General**

Double-Convex Lens **Type:**

**Physical & Mechanical Properties**

12.00 ±0.025	<b>Diameter (mm):</b>
<1	<b>Centering (arcmin):</b>
Protective as needed	<b>Bevel:</b>
2.74	<b>Center Thickness CT (mm):</b>
±0.05	<b>Center Thickness Tolerance (mm):</b>
2.00	<b>Edge Thickness ET (mm):</b>
11.00	<b>Clear Aperture CA (mm):</b>

### Optical Properties

47.09	<b>Back Focal Length BFL (mm):</b>
48.00	<b>Effective Focal Length EFL (mm):</b>
VIS-EXT (350-700nm)	<b>Coating:</b>
R <sub>avg</sub> <0.5% @ 350 - 700nm	<b>Coating Specification:</b>
<b>N-BK7</b>	<b>Substrate:</b> <input type="checkbox"/>
40-20	<b>Surface Quality:</b>
1.5λ	<b>Power (P-V) @ 632.8nm:</b>
λ/4	<b>Irregularity (P-V) @ 632.8nm:</b>
49.14	<b>Radius R<sub>1</sub>=R<sub>2</sub> (mm):</b>
4.00	<b>f#:</b>
587.6	<b>Focal Length Specification Wavelength (nm):</b>
±1	<b>Focal Length Tolerance (%):</b>
0.13	<b>Numerical Aperture NA:</b>
350 - 700	<b>Wavelength Range (nm):</b>

### Regulatory Compliance

<a href="#">View</a>	<b>Certificate of Conformance:</b>
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## Product Details

- AR Coated to Provide <0.5% Reflectance per Surface for 350 - 700nm
- Minimize 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





across the UV - NIR spectra.  
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**N-BK7 with MgF<sub>2</sub> Coating  
 Typical Transmission**



Typical transmission of a 3mm thick N-BK7 window with MgF<sub>2</sub> (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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**N-BK7 with VIS-EXT Coating  
 Typical Transmission**



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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**N-BK7 with VIS-NIR Coating  
 Typical Transmission**



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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**N-BK7 with VIS 0° Coating  
 Typical Transmission**



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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**N-BK7 with YAG-BBAR Coating  
 Typical Transmission**



**N-BK7 with NIR I Coating  
Typical Transmission**



**N-BK7 with NIR II Coating  
Typical Transmission**



**Compatible Mounts**