

TECHSPEC[®] 20mm Dia. x 80mm FL, VIS-EXT Coated, Double-Convex Lens



Stock **#89-174** **8 In Stock**

☐ [Other Coating Options](#)

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1

+

A\$87^{.20}

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Volume Pricing	
Qty 1-9	A\$87.20 each
Qty 10-24	A\$78.40 each
Qty 25-99	A\$70.00 each
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General

Type:
Double-Convex Lens

Physical & Mechanical Properties

Diameter (mm):
20.00 +0.000/-0.025

<1	Centering (arcmin):
Protective as needed	Bevel:
4.00	Center Thickness CT (mm):
±0.10	Center Thickness Tolerance (mm):
2.78	Edge Thickness ET (mm):
19.00	Clear Aperture CA (mm):
Optical Properties	
78.67	Back Focal Length BFL (mm):
80.00	Effective Focal Length EFL (mm):
VIS-EXT (350-700nm)	Coating:
R _{avg} <0.5% @ 350 - 700nm	Coating Specification:
N-BK7	Substrate: □
40-20	Surface Quality:
1.5λ	Power (P-V) @ 632.8nm:
λ/4	Irregularity (P-V) @ 632.8nm:
82.00	Radius R ₁ =R ₂ (mm):
4.00	f/#:
587.6	Focal Length Specification Wavelength (nm):
±1	Focal Length Tolerance (%):
0.13	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
- Minimize Aberrations Including Spherical and Coma
- [UV Fused Silica DCX Lenses](#) Available
- Other Coating Options Available: [Uncoated](#), [MgF₂](#), [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



	Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra. Click Here to Download Data
N-BK7 with MgF₂ Coating Typical Transmission 	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. Click Here to Download Data
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. Click Here to Download Data
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. Click Here to Download Data
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. Click Here to Download Data



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:

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

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 NIR I (600 - 1050nm) coating at 0° AOI.

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

$$R_{\text{avg}} \leq 0.5\% \text{ @ } 600 - 1050\text{nm}$$

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 NIR II (750 - 1550nm) coating at 0° AOI.

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

$$R_{\text{abs}} \leq 1.5\% \text{ @ } 750 - 800\text{nm}$$
$$R_{\text{abs}} \leq 1.0\% \text{ @ } 800 - 1550\text{nm}$$
$$R_{\text{avg}} \leq 0.7\% \text{ @ } 750 - 1550\text{nm}$$

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

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Compatible Mounts