

TECHSPEC[®] 50mm Dia. x 100mm FL Uncoated, Double-Convex Lens



Stock **#32-980** 20+ In Stock

☐ [Other Coating Options](#)

-

1

+

€54^{.50}

ADD TO CART

Volume Pricing	
Qty 1-9	€54,50 each
Qty 10-24	€49,25 each
Qty 25-99	€43,50 each
Need More?	Request Quote

Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Double-Convex Lens

Type:

Physical & Mechanical Properties

50.00 +0.0/-0.025	Diameter (mm):
<1	Centering (arcmin):
Protective as needed	Bevel:
10.00	Center Thickness CT (mm):
±0.10	Center Thickness Tolerance (mm):
3.76	Edge Thickness ET (mm):
49.00	Clear Aperture CA (mm):
Optical Properties	
96.65	Back Focal Length BFL (mm):
100.00	Effective Focal Length EFL (mm):
Uncoated	Coating:
N-BK7	Substrate: □
40-20	Surface Quality:
1.5λ	Power (P-V) @ 632.8nm:
λ/4	Irregularity (P-V) @ 632.8nm:
101.63	Radius R ₁ =R ₂ (mm):
2.00	f/#:
587.6	Focal Length Specification Wavelength (nm):
±1	Focal Length Tolerance (%):
0.25	Numerical Aperture NA:
350 - 2200	Wavelength Range (nm):
Regulatory Compliance	
Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 235:

Product Details

- Ideal for Imaging Applications
- Minimize Aberrations Including Spherical and Coma
- UV Fused Silica DCX Lenses Available
- Anti-Reflection Coating Options: MgF₂, VIS 0°, VIS-NIR, NIR I, NIR II, VIS-EXT, and YAG-BBAR

TECHSPEC® Uncoated 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 canceled due to the symmetric lens design. TECHSPEC® Uncoated Double-Convex Lenses resist the effects from various aberrations in a lens design that are ultimately seen in performance and affect modulation transfer function (MTF), spot size, telecentricity, depth of field (DOF), and others. These lenses are available in a variety of substrates and coating options for the visible and NIR spectra.

Technical Information



N-BK7																											
Uncoated N-BK7 Typical Transmission <table border="1"><caption>Approximate data for Uncoated N-BK7 Typical Transmission</caption><thead><tr><th>Wavelength (nm)</th><th>Transmission T (%)</th></tr></thead><tbody><tr><td>300</td><td>70</td></tr><tr><td>400</td><td>92</td></tr><tr><td>600</td><td>92</td></tr><tr><td>800</td><td>92</td></tr><tr><td>1000</td><td>92</td></tr><tr><td>1200</td><td>92</td></tr><tr><td>1400</td><td>91</td></tr><tr><td>1600</td><td>92</td></tr><tr><td>1800</td><td>91</td></tr><tr><td>2000</td><td>90</td></tr><tr><td>2200</td><td>88</td></tr></tbody></table>	Wavelength (nm)	Transmission T (%)	300	70	400	92	600	92	800	92	1000	92	1200	92	1400	91	1600	92	1800	91	2000	90	2200	88	Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra. Click Here to Download Data		
Wavelength (nm)	Transmission T (%)																										
300	70																										
400	92																										
600	92																										
800	92																										
1000	92																										
1200	92																										
1400	91																										
1600	92																										
1800	91																										
2000	90																										
2200	88																										
N-BK7 with MgF₂ Coating Typical Transmission <table border="1"><caption>Approximate data for N-BK7 with MgF2 Coating Typical Transmission</caption><thead><tr><th>Wavelength (nm)</th><th>Transmission T (%)</th></tr></thead><tbody><tr><td>300</td><td>70</td></tr><tr><td>400</td><td>95</td></tr><tr><td>500</td><td>97</td></tr><tr><td>600</td><td>97</td></tr><tr><td>800</td><td>96</td></tr><tr><td>1000</td><td>95</td></tr><tr><td>1200</td><td>94</td></tr><tr><td>1400</td><td>93</td></tr><tr><td>1600</td><td>93</td></tr><tr><td>1800</td><td>92</td></tr><tr><td>2000</td><td>91</td></tr><tr><td>2200</td><td>90</td></tr></tbody></table>	Wavelength (nm)	Transmission T (%)	300	70	400	95	500	97	600	97	800	96	1000	95	1200	94	1400	93	1600	93	1800	92	2000	91	2200	90	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 - 700nm (N-BK7) Data outside this range is not guaranteed and is for reference only. Click Here to Download Data
Wavelength (nm)	Transmission T (%)																										
300	70																										
400	95																										
500	97																										
600	97																										
800	96																										
1000	95																										
1200	94																										
1400	93																										
1600	93																										
1800	92																										
2000	91																										
2200	90																										
N-BK7 with VIS-EXT Coating Typical Transmission <table border="1"><caption>Approximate data for N-BK7 with VIS-EXT Coating Typical Transmission</caption><thead><tr><th>Wavelength (nm)</th><th>Transmission T (%)</th></tr></thead><tbody><tr><td>300</td><td>70</td></tr><tr><td>350</td><td>95</td></tr><tr><td>400</td><td>98</td></tr><tr><td>500</td><td>99</td></tr><tr><td>600</td><td>99</td></tr><tr><td>700</td><td>98</td></tr><tr><td>800</td><td>95</td></tr><tr><td>900</td><td>90</td></tr><tr><td>1000</td><td>85</td></tr><tr><td>1100</td><td>80</td></tr><tr><td>1200</td><td>78</td></tr></tbody></table>	Wavelength (nm)	Transmission T (%)	300	70	350	95	400	98	500	99	600	99	700	98	800	95	900	90	1000	85	1100	80	1200	78	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 - 700nm Data outside this range is not guaranteed and is for reference only. Click Here to Download Data		
Wavelength (nm)	Transmission T (%)																										
300	70																										
350	95																										
400	98																										
500	99																										
600	99																										
700	98																										
800	95																										
900	90																										
1000	85																										
1100	80																										
1200	78																										
N-BK7 with VIS-NIR Coating Typical Transmission <table border="1"><caption>Approximate data for N-BK7 with VIS-NIR Coating Typical Transmission</caption><thead><tr><th>Wavelength (nm)</th><th>Transmission T (%)</th></tr></thead><tbody><tr><td>300</td><td>70</td></tr><tr><td>400</td><td>98</td></tr><tr><td>500</td><td>99</td></tr><tr><td>600</td><td>99</td></tr><tr><td>700</td><td>98</td></tr><tr><td>800</td><td>99</td></tr><tr><td>900</td><td>98</td></tr><tr><td>1000</td><td>97</td></tr><tr><td>1100</td><td>90</td></tr><tr><td>1200</td><td>78</td></tr></tbody></table>	Wavelength (nm)	Transmission T (%)	300	70	400	98	500	99	600	99	700	98	800	99	900	98	1000	97	1100	90	1200	78	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: $R_{abs} \leq 0.25\%$ @ 880nm $R_{avg} \leq 1.25\%$ @ 400 - 870nm $R_{avg} \leq 1.25\%$ @ 890 - 1000nm Data outside this range is not guaranteed and is for reference only. Click Here to Download Data				
Wavelength (nm)	Transmission T (%)																										
300	70																										
400	98																										
500	99																										
600	99																										
700	98																										
800	99																										
900	98																										
1000	97																										
1100	90																										
1200	78																										

2004006008001000120014001600 Wavelength (nm)	
N-BK7 with VIS 0° Coating Typical Transmission T (%) 100 95 90 85 80 75 70 200 400 600 800 1000 1200 Wavelength (nm)	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: $R_{avg} \leq 0.4\% \text{ @ } 425 - 675\text{nm}$ Data outside this range is not guaranteed and is for reference only. Click Here to Download Data
N-BK7 with YAG-BBAR Coating Typical Transmission T (%) 100 95 90 85 80 75 70 200 400 600 800 1000 1200 1400 1600 Wavelength (nm)	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: $R_{abs} \leq 0.25\% \text{ @ } 532\text{nm}$ $R_{abs} \leq 0.25\% \text{ @ } 1064\text{nm}$ $R_{avg} \leq 1.0\% \text{ @ } 500 - 1100\text{nm}$ 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 T (%) 100 95 90 85 80 75 70 200 400 600 800 1000 1200 1400 1600 Wavelength (nm)	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: $R_{avg} \leq 0.5\% \text{ @ } 600 - 1050\text{nm}$ Data outside this range is not guaranteed and is for reference only. Click Here to Download Data
N-BK7 with NIR II Coating Typical Transmission T (%) 100 95 90 85 80 75 70 200 400 600 800 1000 1200 1400 1600 1800 2000 Wavelength (nm)	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: $R_{abs} \leq 1.5\% \text{ @ } 750 - 800\text{nm}$ $R_{abs} \leq 1.0\% \text{ @ } 800 - 1550\text{nm}$ $R_{avg} \leq 0.7\% \text{ @ } 750 - 1550\text{nm}$ Data outside this range is not guaranteed and is for reference only. Click Here to Download Data

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
