

[See all 164 Products in Family](#)

TECHSPEC[®] 40mm Dia. x 80mm FL, NIR II, Inked, Double-Convex Lens



Stock **#33-424-INK** [CONTACT US](#)

☐ [Other Coating Options](#)

-

1

+

€82^{.00}

ADD TO CART

Volume Pricing	
Qty 1-9	€82,00 each
Qty 10-24	€73,50 each
Qty 25-99	€65,50 each
Need More?	Request Quote

ⓘ Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Double-Convex Lens

Type:

Physical & Mechanical Properties

40.00 ±0.025	Diameter (mm):
<1	Centering (arcmin):
8.00	Center Thickness CT (mm):
±0.10	Center Thickness Tolerance (mm):
3.00	Edge Thickness ET (mm):
39.00	Clear Aperture CA (mm):
Optical Properties	
77.32	Back Focal Length BFL (mm):
80.00	Effective Focal Length EFL (mm):
NIR II (750-1550nm)	Coating:
R _{abs} ≤1.5% @ 750 - 800nm R _{abs} ≤1.0% @ 800 - 1550nm R _{avg} ≤0.7% @ 750 - 1550nm	Coating Specification:
N-BK7	Substrate: ☐
40-20	Surface Quality:
1.5λ	Power (P-V) @ 632.8nm:
λ/4	Irregularity (P-V) @ 632.8nm:
81.3	Radius R ₁ =R ₂ (mm):
2.00	f/#:
587.6	Focal Length Specification Wavelength (nm):
±1.00	Focal Length Tolerance (%):
0.25	Numerical Aperture NA:
750 - 1550	Wavelength Range (nm):
8 J/cm² @ 1064nm, 10ns	Damage Threshold, By Design: ☐
Regulatory Compliance	
View	Certificate of Conformance:

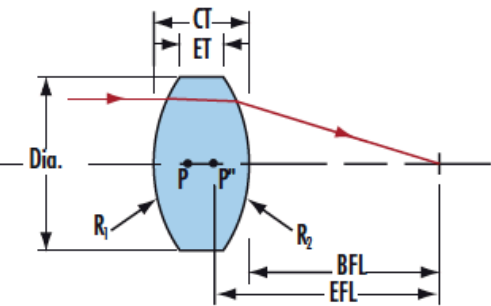
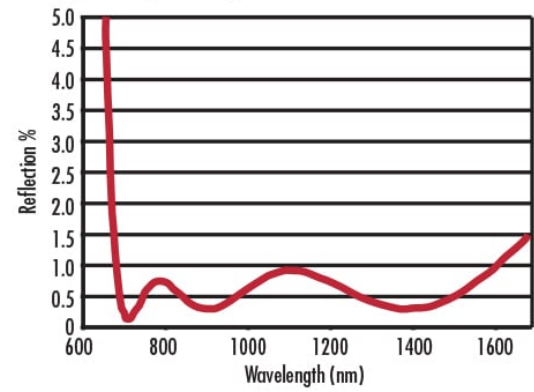
Product Details

- AR Coated to Provide <0.7% Reflectance per Surface for 750 - 1550nm
- Minimize Aberrations Including Spherical and Coma
- [UV Fused Silica DCX Lenses](#) Available
- Other Coating Options Available: [Uncoated](#), [MgF₂](#), [VIS 0°](#), [NIR I](#), [VIS-EXT](#), [VIS-NIR](#), and [YAG-BBAR](#)

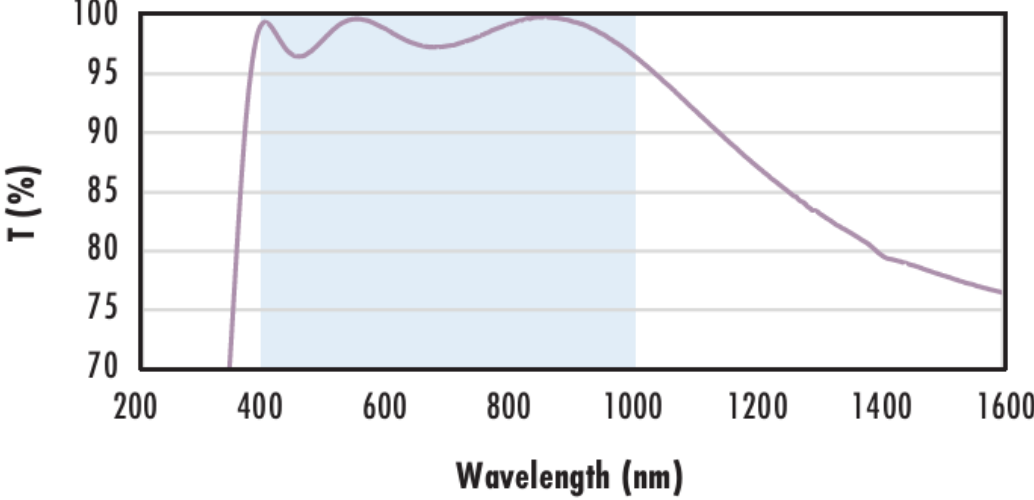
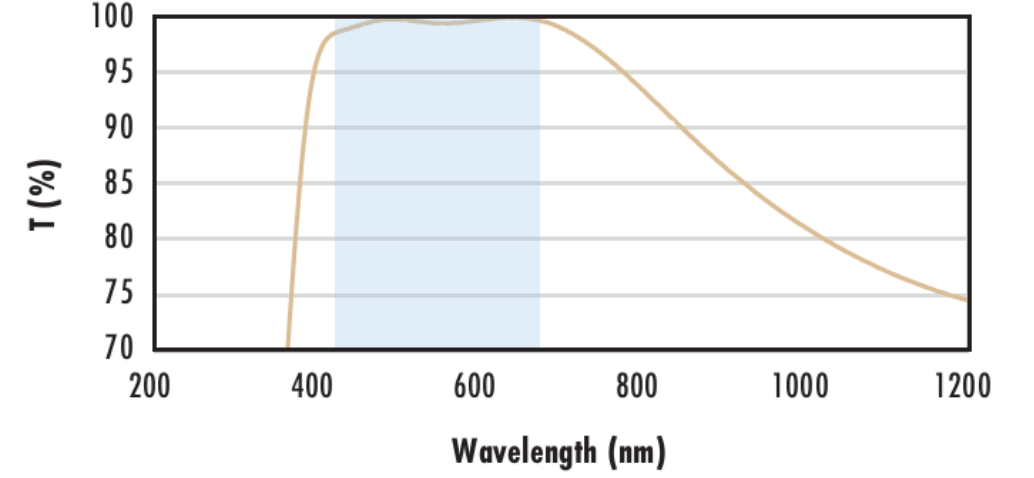
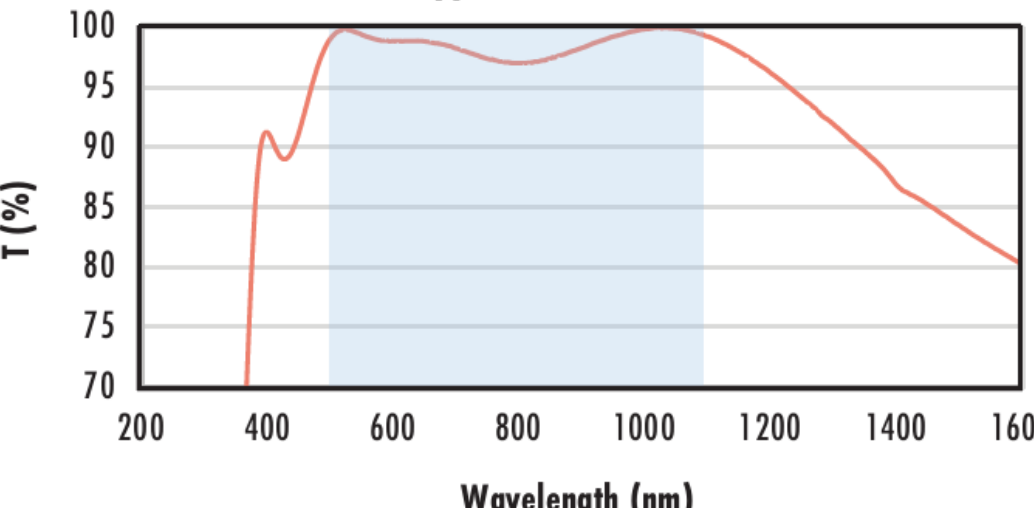
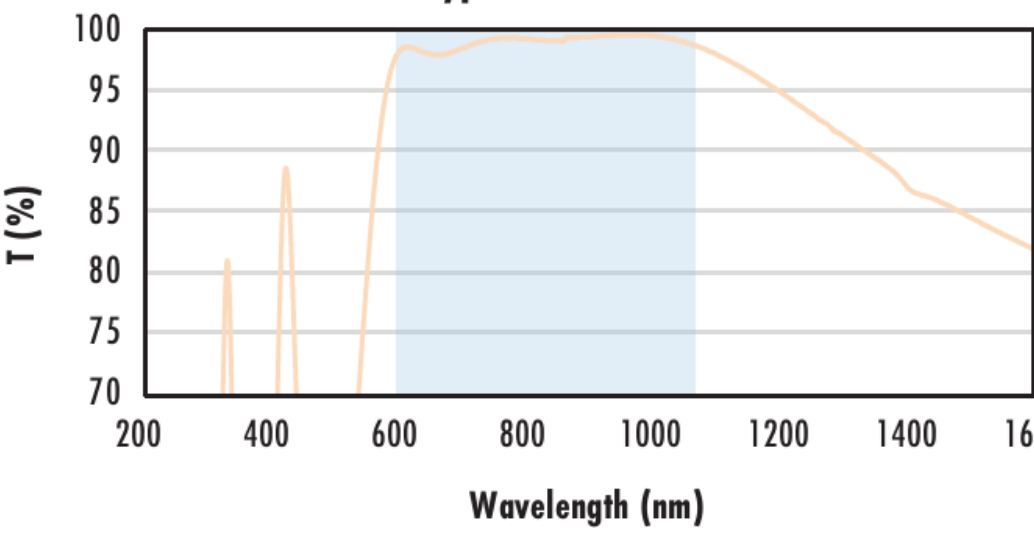
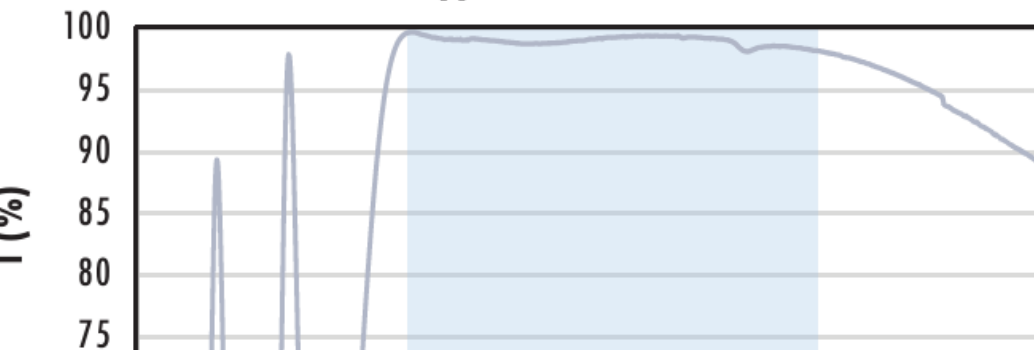
TECHSPEC® NIR II Coated Double-Convex (DCX) Lenses, also referred to as bi-convex lenses, have two positive, symmetrical faces with equal radii on both sides. These lenses are generally recommended for finite imaging applications with a conjugate ratio (ratio between object distance and image distance) 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® NIR II Coated Double-Convex Lenses are available in a variety of substrates and coating options for the visible and NIR spectra.

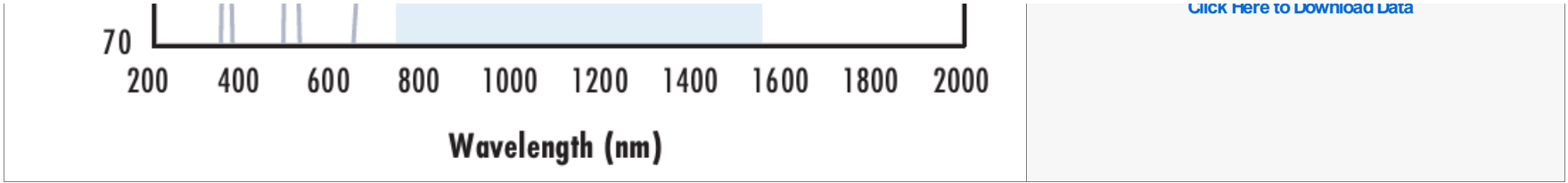
Technical Information

NIR II Coating
 $R_{avg} \leq 0.7\%$ @ 750 - 1550nm, $R_{abs} \leq 1.0\%$ @ 800 - 1550nm
Typ. Energy Density Limit: 8 J/cm² @ 1064nm, 10ns



N-BK7																											
Uncoated N-BK7 Typical Transmission <table border="1"><caption>Approximate data for Uncoated N-BK7 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>92</td></tr><tr><td>1600</td><td>92</td></tr><tr><td>1800</td><td>92</td></tr><tr><td>2000</td><td>91</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	92	1600	92	1800	92	2000	91	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	92																										
1600	92																										
1800	92																										
2000	91																										
2200	88																										
N-BK7 with MgF₂ Coating Typical Transmission <table border="1"><caption>Approximate data for N-BK7 with MgF2 Coating 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>96</td></tr><tr><td>800</td><td>95</td></tr><tr><td>1000</td><td>94</td></tr><tr><td>1200</td><td>93</td></tr><tr><td>1400</td><td>93</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>90</td></tr></tbody></table>	Wavelength (nm)	Transmission T (%)	300	70	400	95	500	97	600	96	800	95	1000	94	1200	93	1400	93	1600	92	1800	91	2000	90	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	96																										
800	95																										
1000	94																										
1200	93																										
1400	93																										
1600	92																										
1800	91																										
2000	90																										
2200	90																										
N-BK7 with VIS-EXT Coating Typical Transmission <table border="1"><caption>Approximate data for N-BK7 with VIS-EXT Coating 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>99</td></tr><tr><td>800</td><td>95</td></tr><tr><td>900</td><td>88</td></tr><tr><td>1000</td><td>82</td></tr><tr><td>1100</td><td>78</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	99	800	95	900	88	1000	82	1100	78	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																										
400	98																										
500	99																										
600	99																										
700	99																										
800	95																										
900	88																										
1000	82																										
1100	78																										
1200	78																										
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
N-BK7 with YAG-BBAR Coating Typical Transmission 	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: $R_{abs} \leq 0.25\% @ 532\text{nm}$ $R_{abs} \leq 0.25\% @ 1064\text{nm}$ $R_{avg} \leq 1.0\% @ 500 - 1100\text{nm}$ 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 	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: $R_{avg} \leq 0.5\% @ 600 - 1050\text{nm}$ 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 	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: $R_{abs} \leq 1.5\% @ 750 - 800\text{nm}$ $R_{abs} \leq 1.0\% @ 800 - 1550\text{nm}$ $R_{avg} \leq 0.7\% @ 750 - 1550\text{nm}$ Data outside this range is not guaranteed and is for reference only. Click Here to Download Data



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