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



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1

+

€82^{.00}

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Volume Pricing	
Qty 1-9	€82,00 each
Qty 10-24	€73,50 each
Qty 25-99	€65,50 each
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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:

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](#).

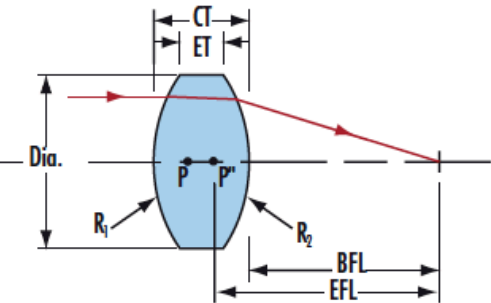
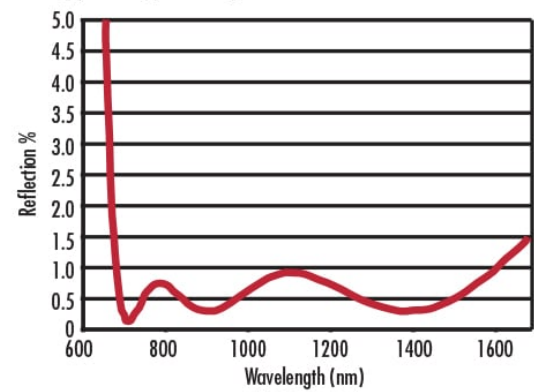
Product Details

- 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](#)

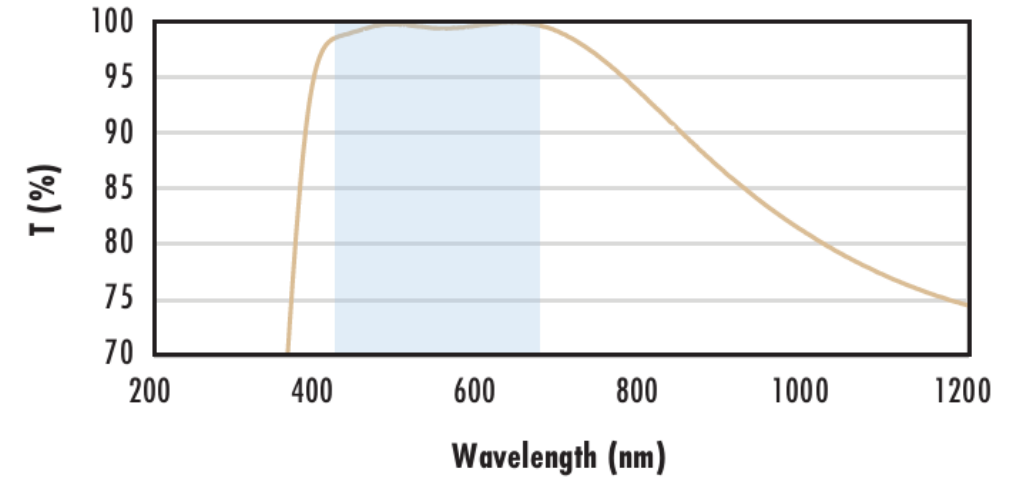
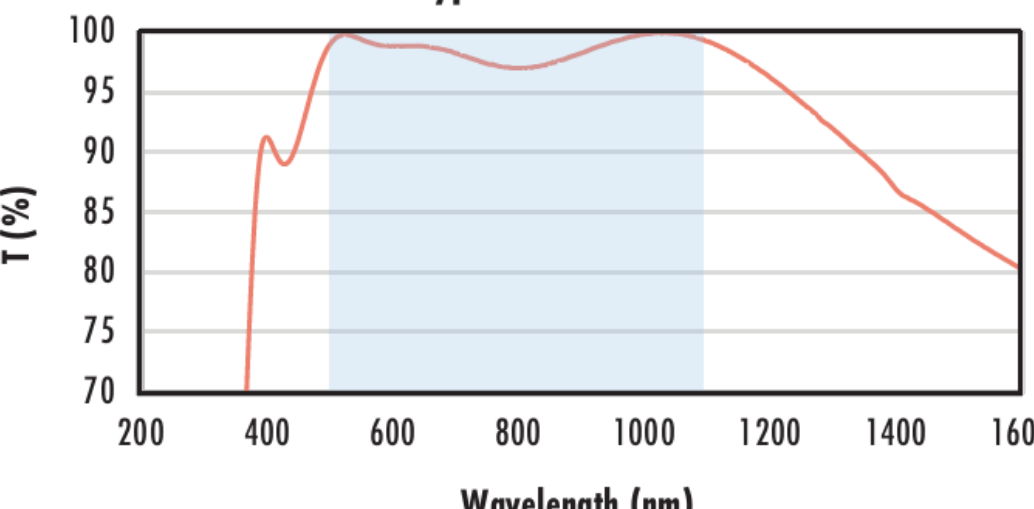
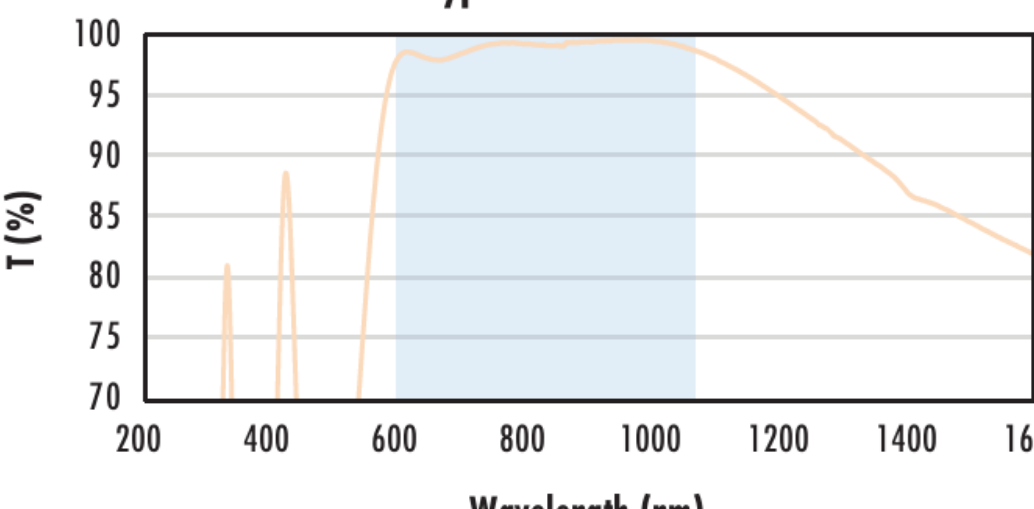
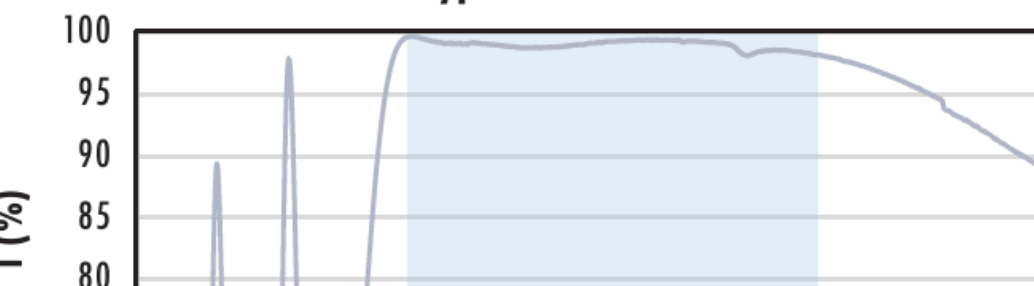
TECHSPEC® NIR II Coated Double-Convex (DCX) Lenses, also referred to as bi-convex lenses, have two positive, symmetrical faces with equal radii on both sides. These lenses are generally recommended for finite imaging applications with a conjugate ratio (ratio between object distance and image distance)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

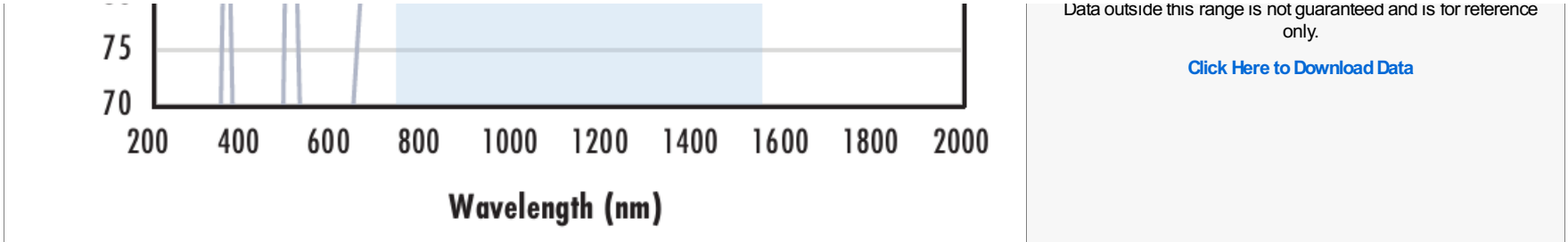
Technical Information

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 A line graph showing the typical transmission of an uncoated N-BK7 window. The y-axis is labeled 'T (%)' and ranges from 70 to 100 in increments of 5. The x-axis is labeled 'Wavelength (nm)' and ranges from 200 to 2200 in increments of 200. The curve starts at approximately 70% at 300 nm, rises sharply to about 92% at 400 nm, and then remains relatively flat, ending at approximately 88% at 2200 nm.	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 A line graph showing the typical transmission of an N-BK7 window with a MgF₂ coating. The y-axis is labeled 'T (%)' and ranges from 70 to 100 in increments of 5. The x-axis is labeled 'Wavelength (nm)' and ranges from 200 to 2200 in increments of 200. The curve starts at approximately 70% at 300 nm, rises to about 95% at 400 nm, peaks at approximately 97% around 500 nm, and then gradually declines to about 90% at 2200 nm. A blue shaded region highlights the wavelength range from approximately 400 nm to 700 nm.	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
N-BK7 with VIS-EXT Coating Typical Transmission A line graph showing the typical transmission of an N-BK7 window with a VIS-EXT coating. The y-axis is labeled 'T (%)' and ranges from 70 to 100 in increments of 5. The x-axis is labeled 'Wavelength (nm)' and ranges from 200 to 1200 in increments of 200. The curve starts at approximately 70% at 300 nm, rises sharply to about 98% at 400 nm, and remains high until approximately 700 nm, where it begins to decline, reaching about 78% at 1200 nm. A blue shaded region highlights the wavelength range from approximately 350 nm to 700 nm.	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
N-BK7 with VIS-NIR Coating	

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



Compatible Mounts

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