

TECHSPEC[®] 40mm Dia. x 100mm FL, MgF₂ Coated, Double-Convex Lens



Stock **#33-407** [CONTACT US](#)

[Other Coating Options](#)

-

1

+

A\$100^{.80}

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Volume Pricing	
Qty 1-9	A\$100.80 each
Qty 10-24	A\$91.20 each
Qty 25-99	A\$80.80 each
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Product Downloads

General

Type:
Double-Convex Lens

Physical & Mechanical Properties

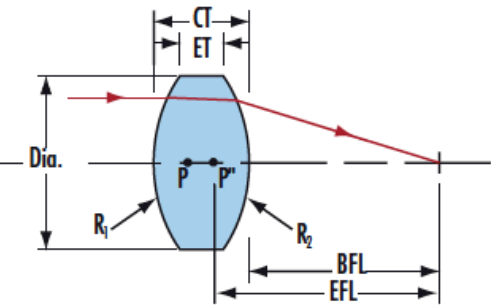
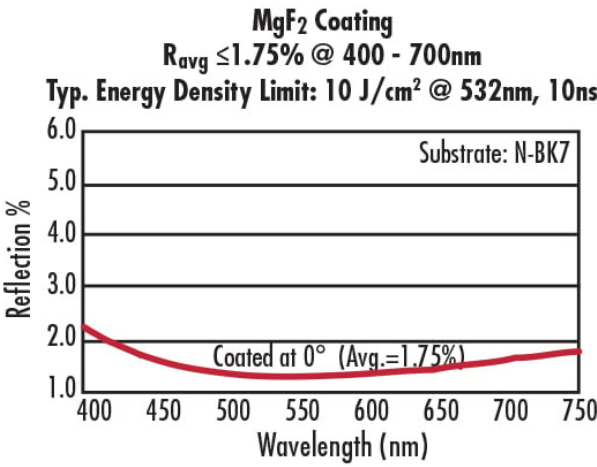
Diameter (mm):
40.00 +0.0/-0.025

<1	Centering (arcmin):
Protective as needed	Bevel:
8.00	Center Thickness CT (mm):
±0.10	Center Thickness Tolerance (mm):
4.04	Edge Thickness ET (mm):
39.00	Clear Aperture CA (mm):
Optical Properties	
97.33	Back Focal Length BFL (mm):
100.00	Effective Focal Length EFL (mm):
MgF ₂ (400-700nm)	Coating:
R _{avg} ≤1.75% @ 400 - 700nm	Coating Specification:
N-BK7	Substrate: ☐
40-20	Surface Quality:
1.5λ	Power (P-V) @ 632.8nm:
λ/4	Irregularity (P-V) @ 632.8nm:
101.98	Radius R ₁ =R ₂ (mm):
2.5	f/#:
587.6	Focal Length Specification Wavelength (nm):
±1	Focal Length Tolerance (%):
0.20	Numerical Aperture NA:
400 - 700	Wavelength Range (nm):
10 J/cm ² @ 532nm, 10ns	Damage Threshold, By Design: ☐
Regulatory Compliance	
Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 235:

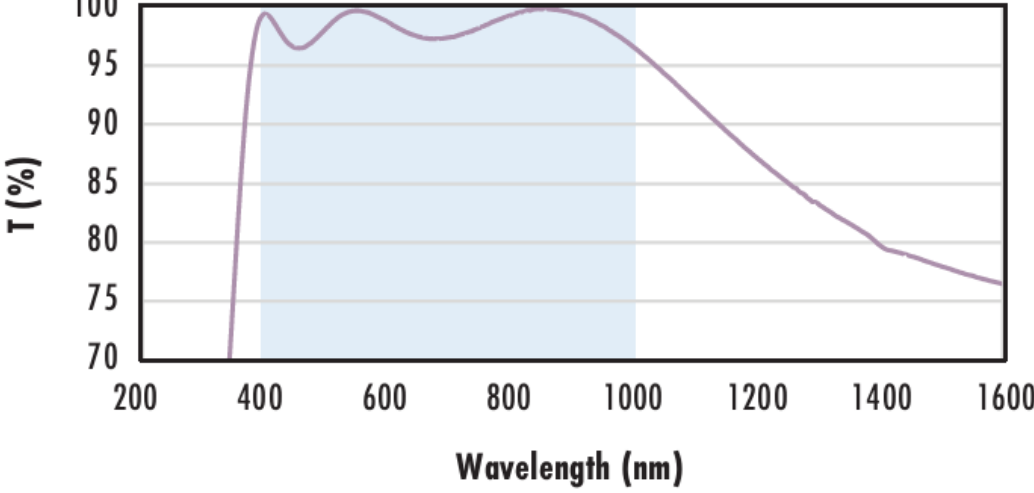
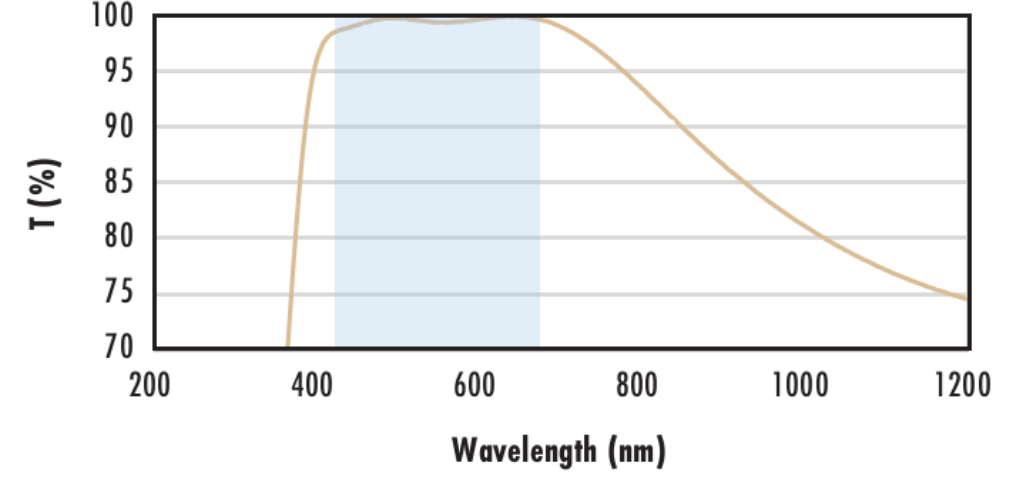
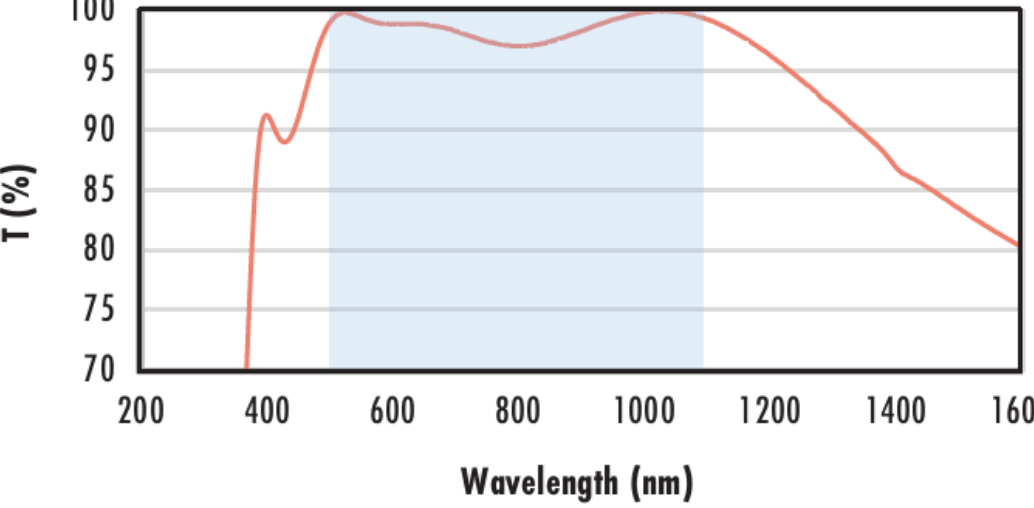
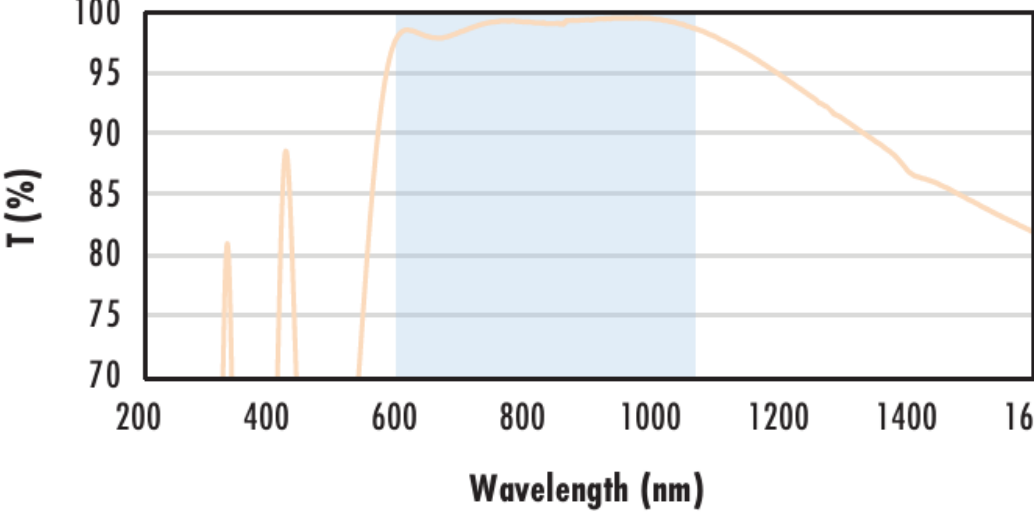
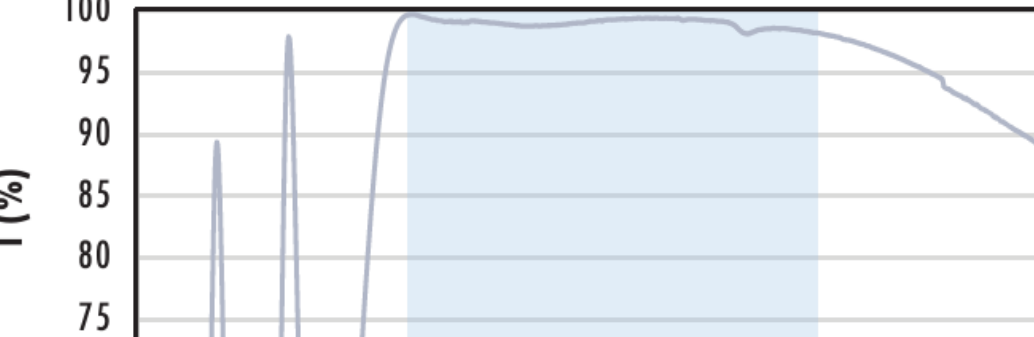
Product Details

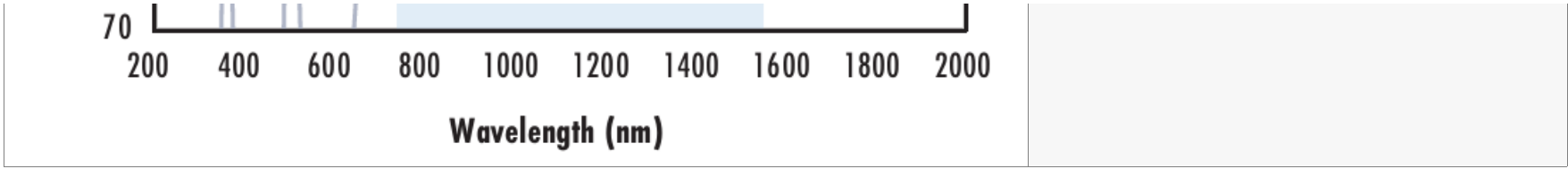
- AR Coated to Provide <1.75% Reflectance per Surface for 400 - 700nm
 - Minimize Aberrations Including Spherical and Coma
 - [UV Fused Silica DCX Lenses](#) Available
 - Other Coating Options Available: [Uncoated](#), [VIS 0°](#), [NIR I](#), [NIR II](#), [VIS-EXT](#), [VIS-NIR](#), and [YAG-BBAR](#)
- TECHSPEC® MgF₂ 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® MgF₂ Coated Double-Convex Lenses are available in a variety of substrates and coating options for the visible and NIR spectra.

Technical Information



Uncoated N-BK7 Typical Transmission <table border="1"><caption>Approximate data for Uncoated N-BK7 Transmission</caption><thead><tr><th>Wavelength (nm)</th><th>T (%)</th></tr></thead><tbody><tr><td>200</td><td>70</td></tr><tr><td>300</td><td>85</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)	T (%)	200	70	300	85	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		
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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>T (%)</th></tr></thead><tbody><tr><td>200</td><td>70</td></tr><tr><td>300</td><td>90</td></tr><tr><td>400</td><td>95</td></tr><tr><td>500</td><td>98</td></tr><tr><td>600</td><td>97</td></tr><tr><td>700</td><td>97</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)	T (%)	200	70	300	90	400	95	500	98	600	97	700	97	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: $R_{avg} \leq 0.5\% @ 350 - 700\text{nm}$ Data outside this range is not guaranteed and is for reference only. Click Here to Download Data				
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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. 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



Coating Curves

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

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Compatible Mounts

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