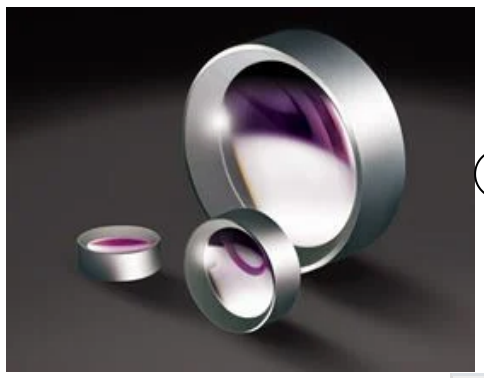
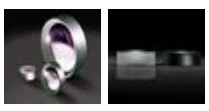
TECHSPEC®

6.0mm Diameter x -18 FL, MgF_2 Coated, Plano-Concave Lens





Stock #45-011 20+ In Stock

Other Coating Options

- 1 +

£31.60

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Volume Pricing	
Qty 1-9	£31.60 each
Qty 10-25	£28.20 each
Qty 26-49	£25.40 each
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General

Type:	Plano-Concave Lens

Physical & Mechanical Properties

Diameter (mm):	6.00 +0.0/-0.025	**Bevel:**	Protective as needed
Center Thickness CT (mm):	2.00	**Center Thickness Tolerance (mm):**	±0.05
Centering (arcmin):	<1	**Clear Aperture CA (mm):**	5.4
Edge Thickness ET (mm):	2.40		

Optical Properties

Effective Focal Length EFL (mm):	-18.00	**Substrate:** ⓘ	N-BK7
f/#:	3.00	**Numerical Aperture NA:**	0.17
Coating:	MgF_2 (400-700nm)	**Wavelength Range (nm):**	400 - 700
Back Focal Length BFL (mm):	-19.32	**Coating Specification:**	R_{avg} ≤1.75% @ 400 - 700nm
Focal Length Specification	587.6	**Focal Length Tolerance (%):**	±1

Wavelength (nm):			
Radius R_1 (mm):	-9.30	**Surface Quality:**	40-20
Damage Threshold, By Design: ⓘ	10 J/cm^2 @ 532nm, 10ns	**Power (P-V) @ 632.8nm:**	1.5λ
Irregularity (P-V) @ 632.8nm:	λ/4		

Regulatory Compliance

RoHS 2015:	**Compliant**	**Certificate of Conformance:**	**View**
Reach 235:	**Compliant**		

Need different specs or modifications?

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

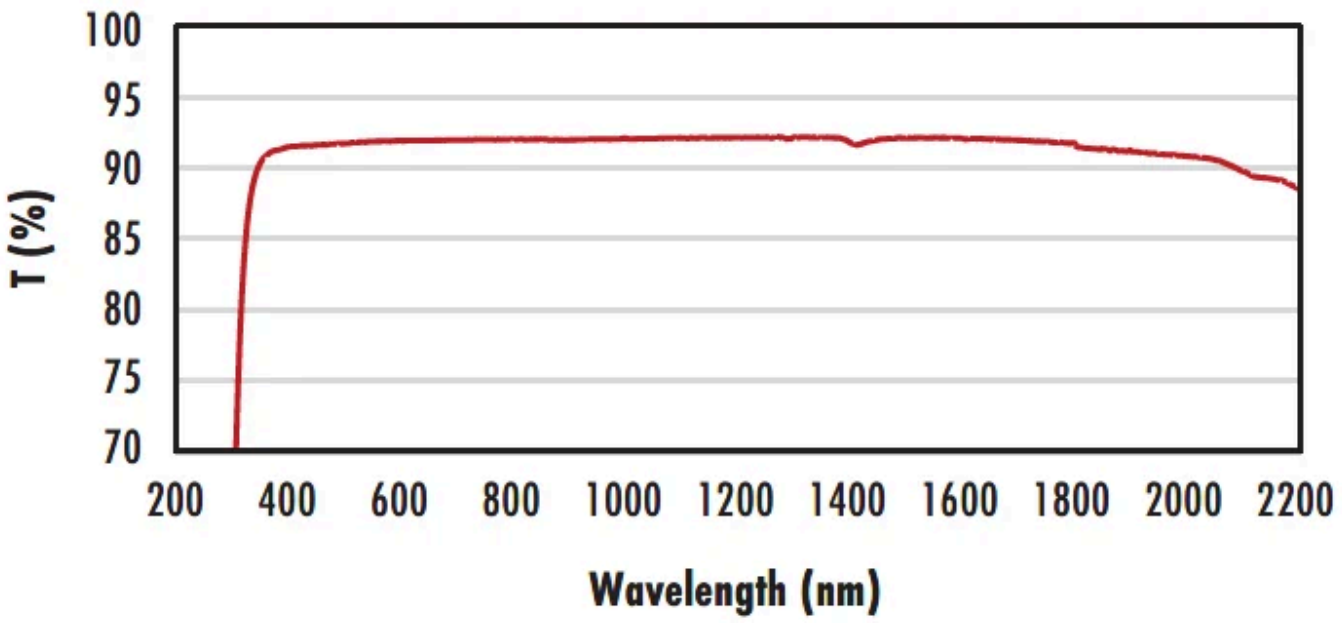
Learn more about our **custom manufacturing capabilities** or submit an inquiry **here.**

Product Details

- AR Coated to Provide <1.75% Reflectance per Surface for 400 - 700nm
- Designed for 0° Angle of Incidence
- Various Coating Options: **Uncoated**, **VIS-EXT**, **VIS 0°**, **VIS-NIR**, **YAG-BBAR**, **NIR I**, and **NIR II**

TECHSPEC® MgF_2 Coated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the output side of the lens causing this lens to have a negative focal length. These lenses can be used for balancing aberrations created by other lenses within a system due to their negative spherical aberration. Plano-Concave (PCV) lenses are commonly used in a variety of applications including image reduction, beam expansion and telescopes. TECHSPEC MgF_2 Coated Plano-Concave (PCV) Lenses are ideal for broadband applications. These lenses are also available **Uncoated**, **VIS-EXT**, **VIS 0°**, **VIS-NIR**, **YAG-BBAR**, **NIR I**, or with **NIR II** AR coating options.

Technical Information



Typical transmission of a 3mm thick, uncoated N-BK window across the UV - NIR spectra.

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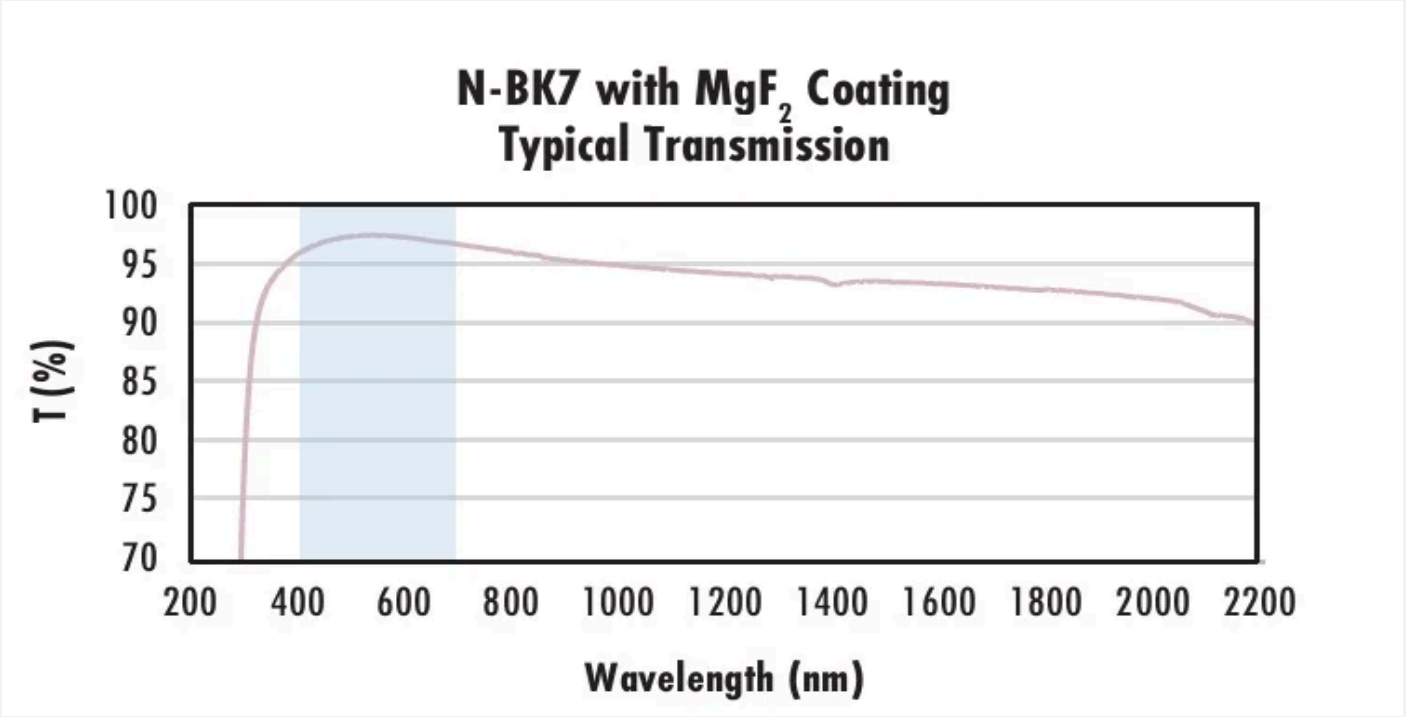

Typical transmission of a 3mm thick N-BK7 window w MgF2 (400-700nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh range, with the following specification:

$R_{avg} \leq 1.75\%$ @ 400 - 700nm (N-BK7)

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

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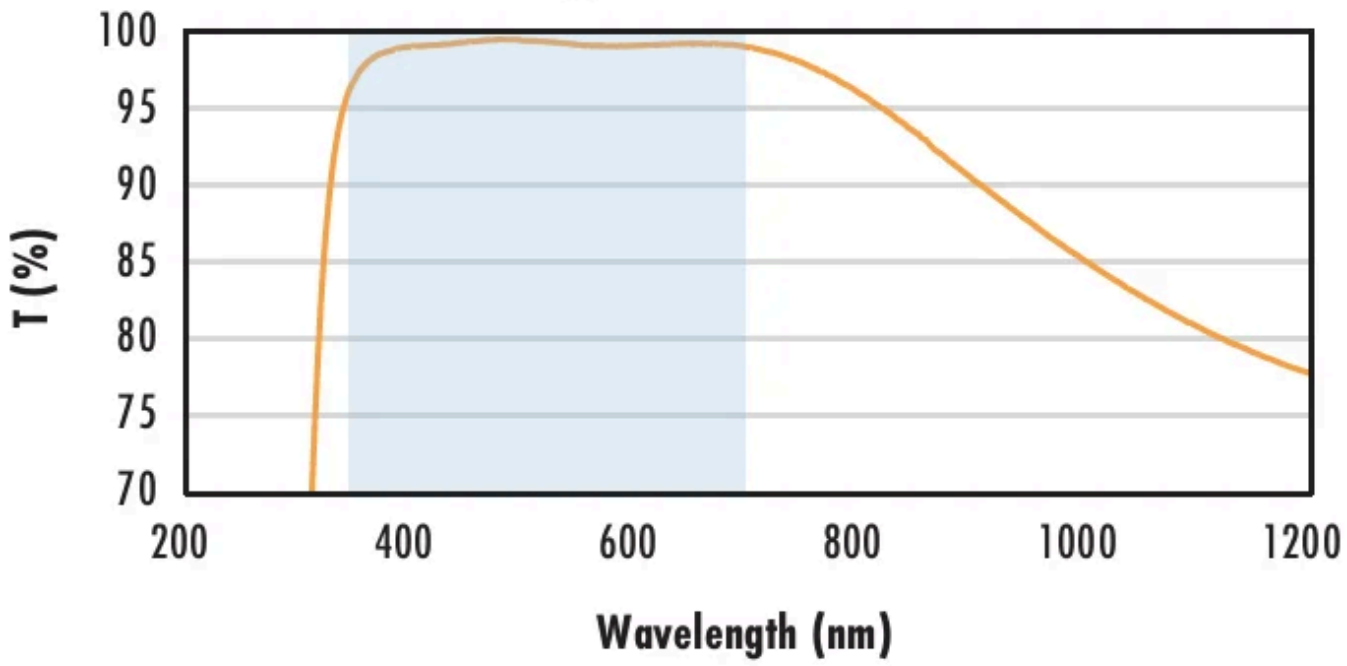

Typical transmission of a 3mm thick N-BK7 window w VIS-EXT (350-700nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh range, with the following specification:

$R_{avg} \leq 0.5\%$ @ 350 - 700nm

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

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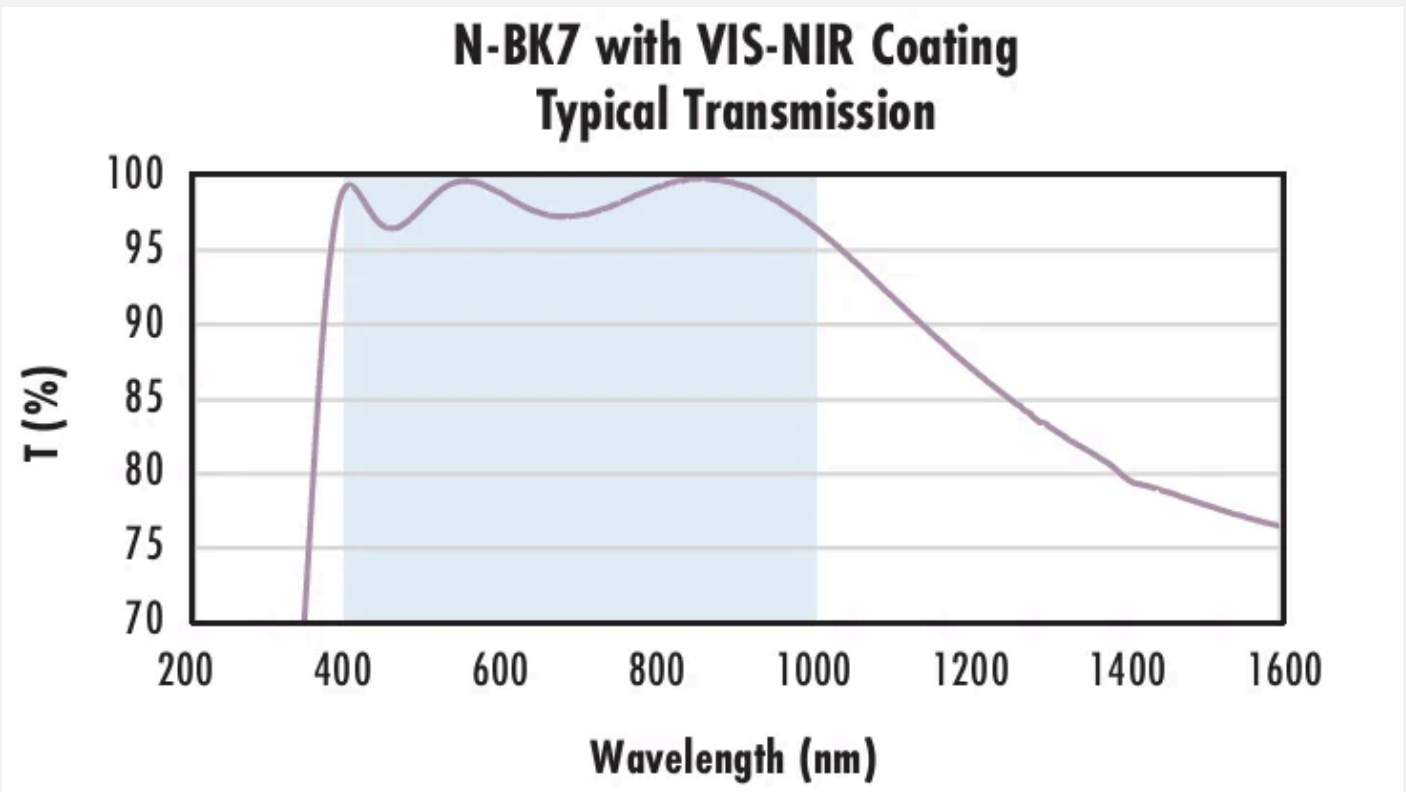

Typical transmission of a 3mm thick N-BK7 window w VIS-NIR (400-1000nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh 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 fo reference only.

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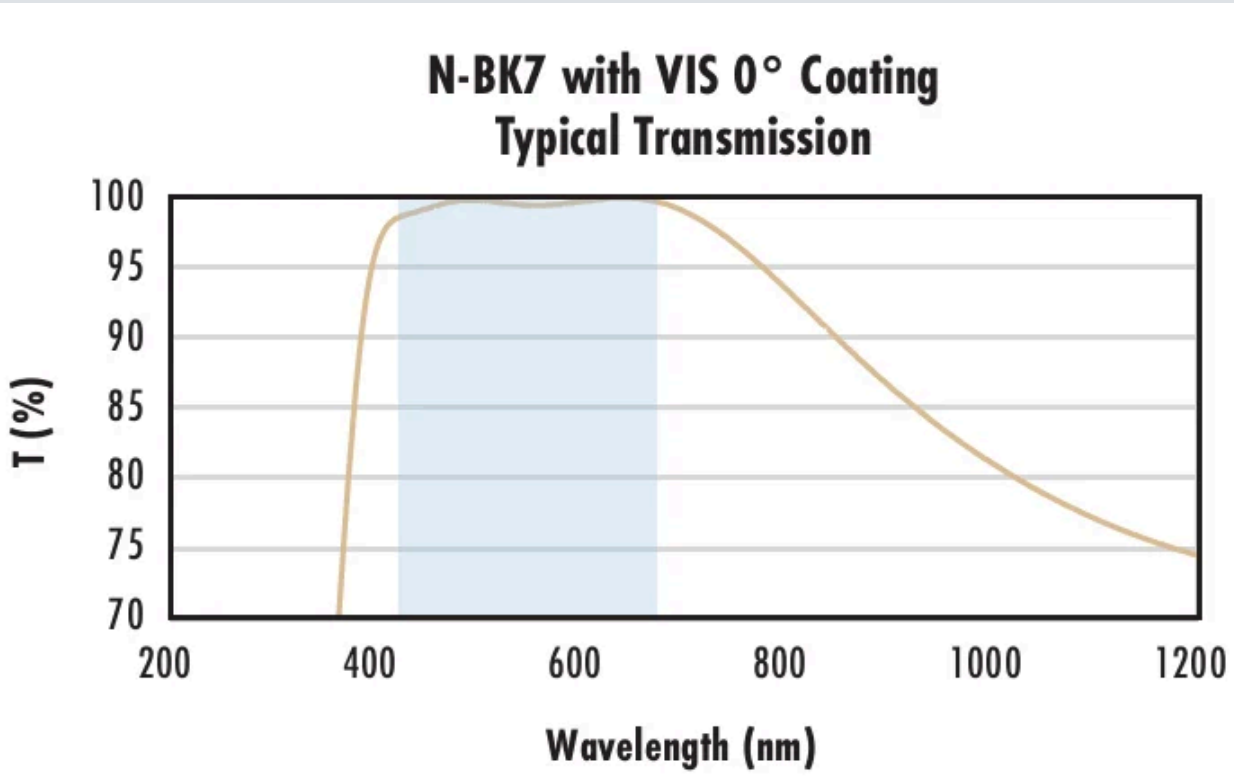

Typical transmission of a 3mm thick N-BK7 window wit 0° (425-675nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh range, with the following specification:

$R_{avg} \leq 0.4\%$ @ 425 - 675nm

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

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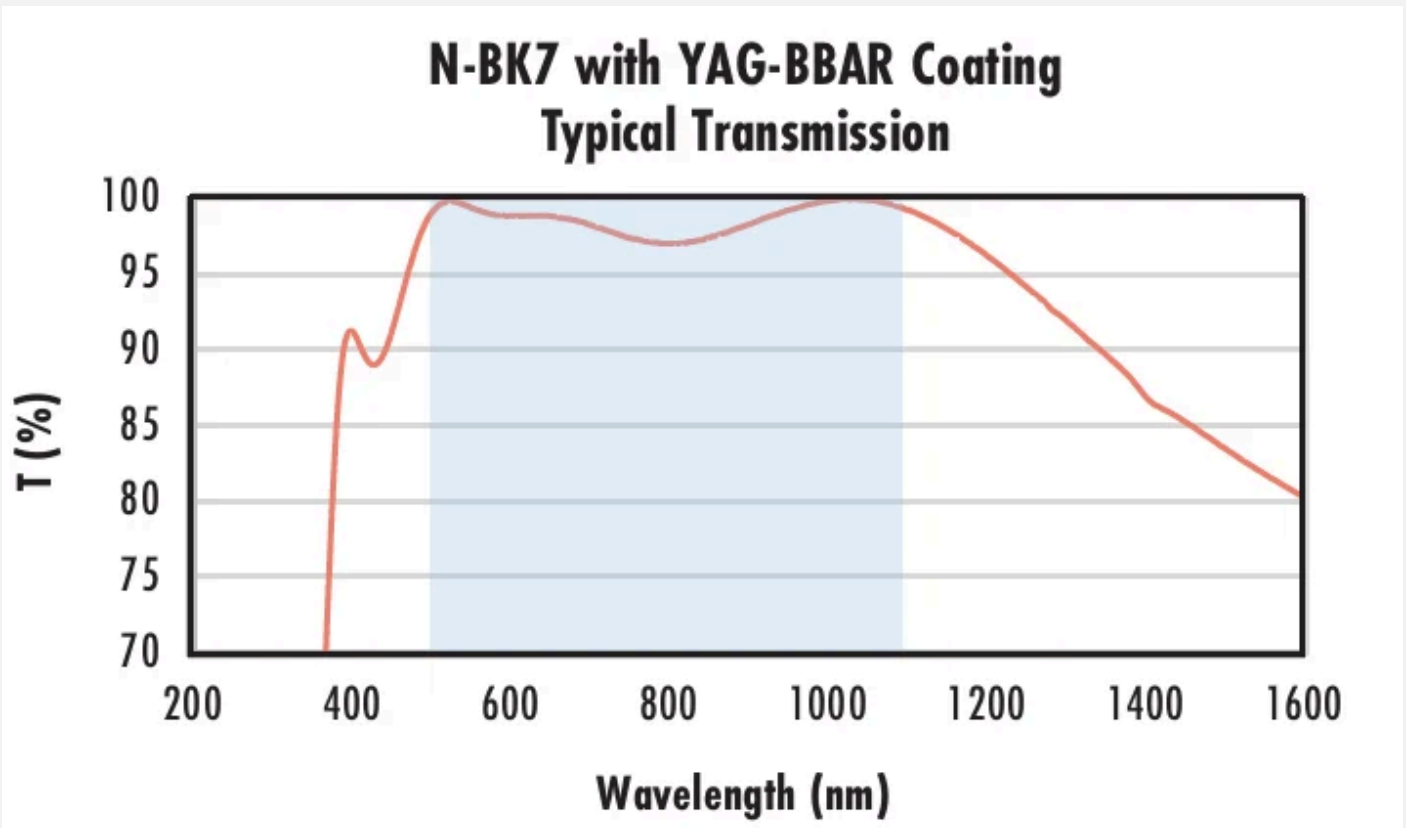

Typical transmission of a 3mm thick N-BK7 window w YAG-BBAR (500-1100nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh range, with the following specification:

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

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

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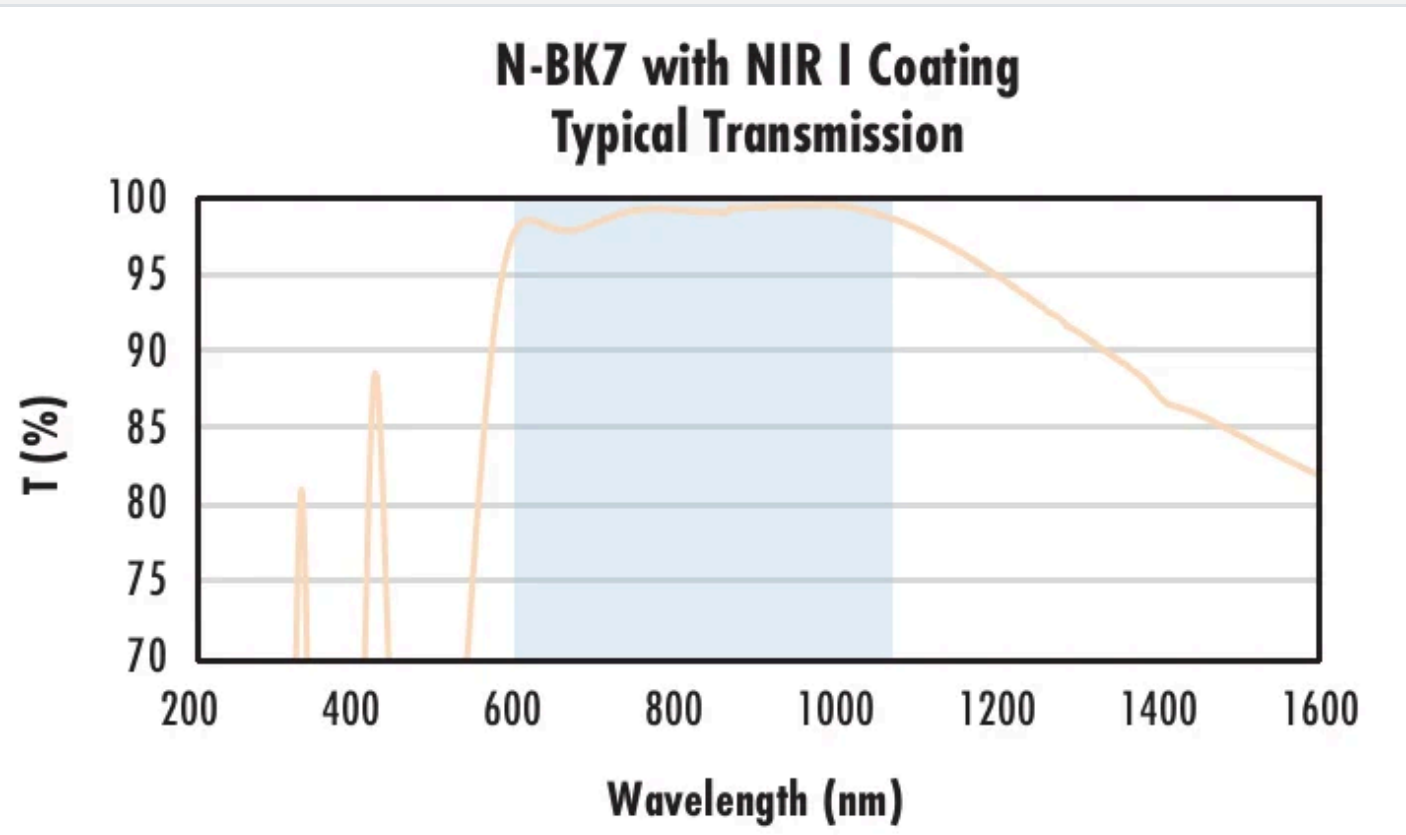

Typical transmission of a 3mm thick N-BK7 window witl I (600 - 1050nm) coating at 0° AOI.

The blue shaded region indicates the coating desig wavelengh range, with the following specification:

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

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

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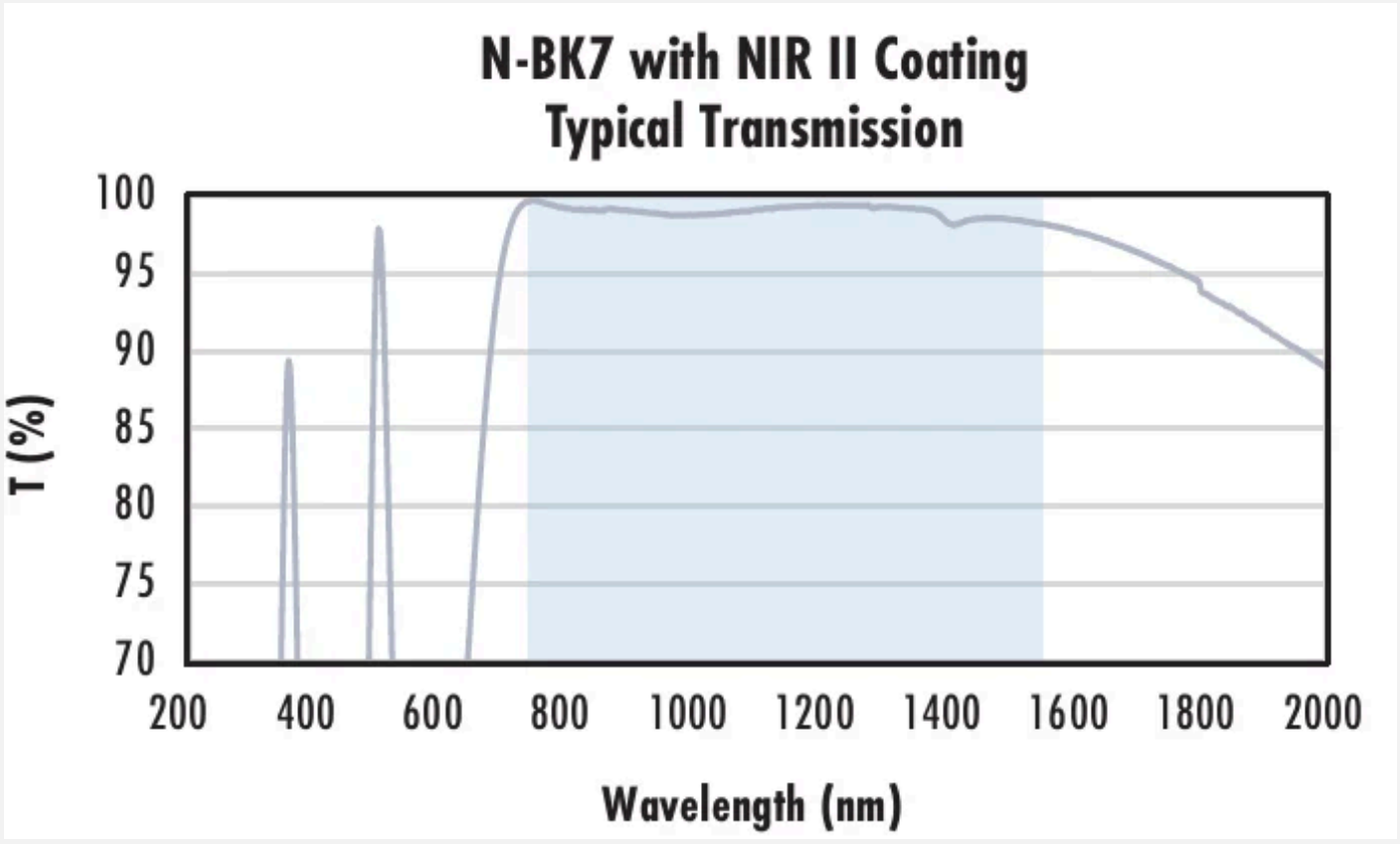

Typical transmission of a 3mm thick N-BK7 window witl
II (750 - 1550nm) coating at 0° AOI.

The blue shaded region indicates the coating desig
wavelengh range, with the following specification:

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

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

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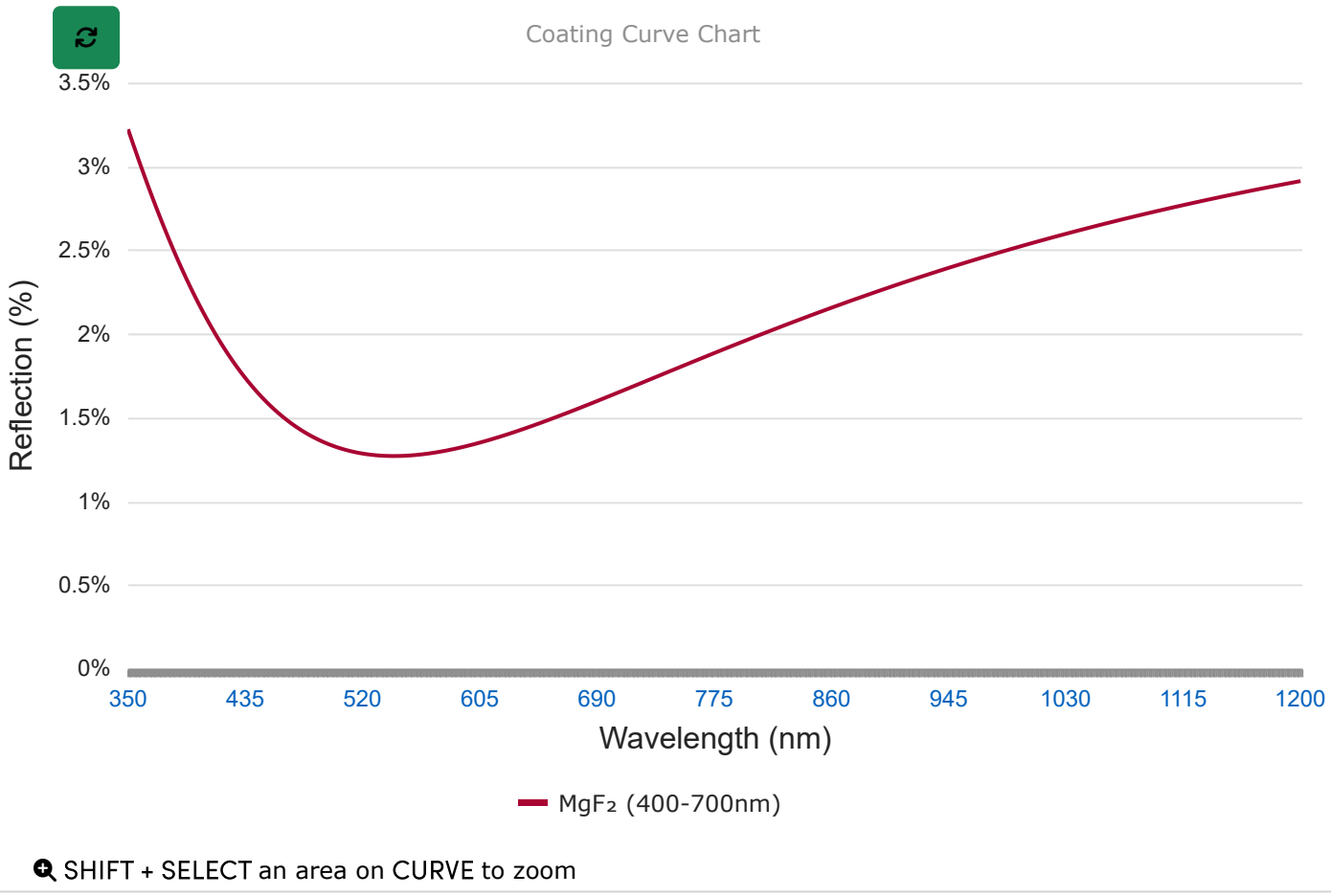
Coating Curves

MgF₂ (400-700nm)



Please note that coating performance outside each product's specified design range is theoretical and may vary.

Related Products

#13-800 - Small Lens Clamp for 4-8mm Dia. Optics
£137.60

Qty

Frequently Purchased Together

#32-849 - 6.0mm Dia. x 36.0mm FL, MgF_2 Coated, Plano-Convex Lens
£29.60

Qty

#32-329 - 5mm, Aluminum Coated, N-BK7 Right Angle Prism
£52.00

Qty

#32-478 - 25.0mm Dia. x 50.0mm FL, MgF_2 Coated, Plano-Convex Lens
£32.40

Qty

#32-480 - 25.0mm Dia. x 75.0mm FL, MgF_2 Coated, Plano-Convex Lens
£32.40

Qty

Compatible Mounts

	Title	Type	Compare	Stock Number	Price ☐	Buy
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MORE+ 	6mm Inner Single Optic Mount	Fixed		#38-745	£32.80 Request Quote	20+ In Stock 1
MORE+ 	25mm Cage 6mm Diameter Lens Mount	Fixed		#85-554	£36.60 Request Quote	1 In Stock 1

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Understanding Optical Specifications

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APPLICATION NOTE

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