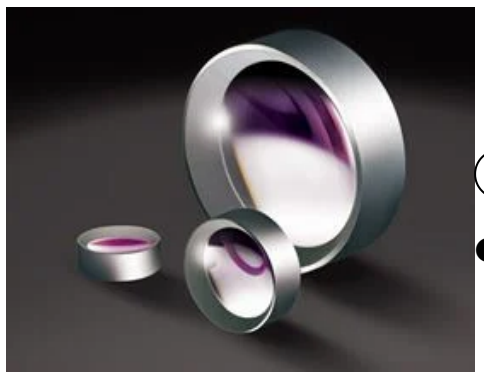
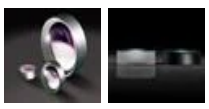
TECHSPEC®

# 12mm Diameter x -15 FL, VIS 0° Coated, Plano-Concave Lens





Stock #48-691 20+ In Stock

Other Coating Options

- 1 +

MRP ₹4,869

Price inclusive of all taxes

ADD TO CART

| Volume Pricing | |
|---|---|
| Qty 1-9 | ₹4,869 each |
| Qty 10-25 | ₹4,364 each |
| Qty 26-49 | ₹3,885 each |
| Need More? | Request Quote |

Product Downloads

STEP:stp | PDF Drawing:pdf | ISO 10110 Drawing | IGES:igs | Zemax:zar | Zemax:zmx | eDrawing:eprt | Code V:seq | EO Spec Sheet

Download All

## General

| | |
|---|---|
| **Type:** | Plano-Concave Lens |

## Physical & Mechanical Properties

| | | | |
|---|---|---|---|
| **Diameter (mm):** | 12.00 +0.0/-0.025 | **Bevel:** | Protective as needed |
| **Center Thickness CT (mm):** | 3.00 | **Center Thickness Tolerance (mm):** | ±0.05 |
| **Centering (arcmin):** | <1 | **Clear Aperture CA (mm):** | 11.00 |
| **Edge Thickness ET (mm):** | 4.47 | | |

## Optical Properties

| | | | |
|---|---|---|---|
| **Effective Focal Length EFL (mm):** | -15.00 | **Substrate:** ⓘ | N-SF11 |
| **f/#:** | 1.25 | **Numerical Aperture NA:** | 0.40 |
| **Coating:** | VIS 0° (425-675nm) | **Wavelength Range (nm):** | 425 - 675 |
| **Back Focal Length BFL (mm):** | -16.68 | **Coating Specification:** | $R_{avg}$ ≤0.4% @ 425 - 675nm |
| **Focal Length Specification Wavelength (nm):** | 587.6 | **Focal Length Tolerance (%):** | ±1 |

| | | | |
|---|---|---|---|
| **Radius $R_1$ (mm):** | -11.77 | **Surface Quality:** | 40-20 |
| **Damage Threshold, By Design:** ⓘ | 5 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** | | |
| **Country of Origin:** | Japan | **Imported By:** | Edmund Optics India Private Limited<br>267, Greystone Building,<br>Second Floor,<br>6th Cross Rd,<br>Binnamangala,<br>Stage 1,<br>Indiranagar,<br>Bengaluru,<br>Karnataka,<br>India 560038<br>Phone: +91-80-6845 0000 |

## 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

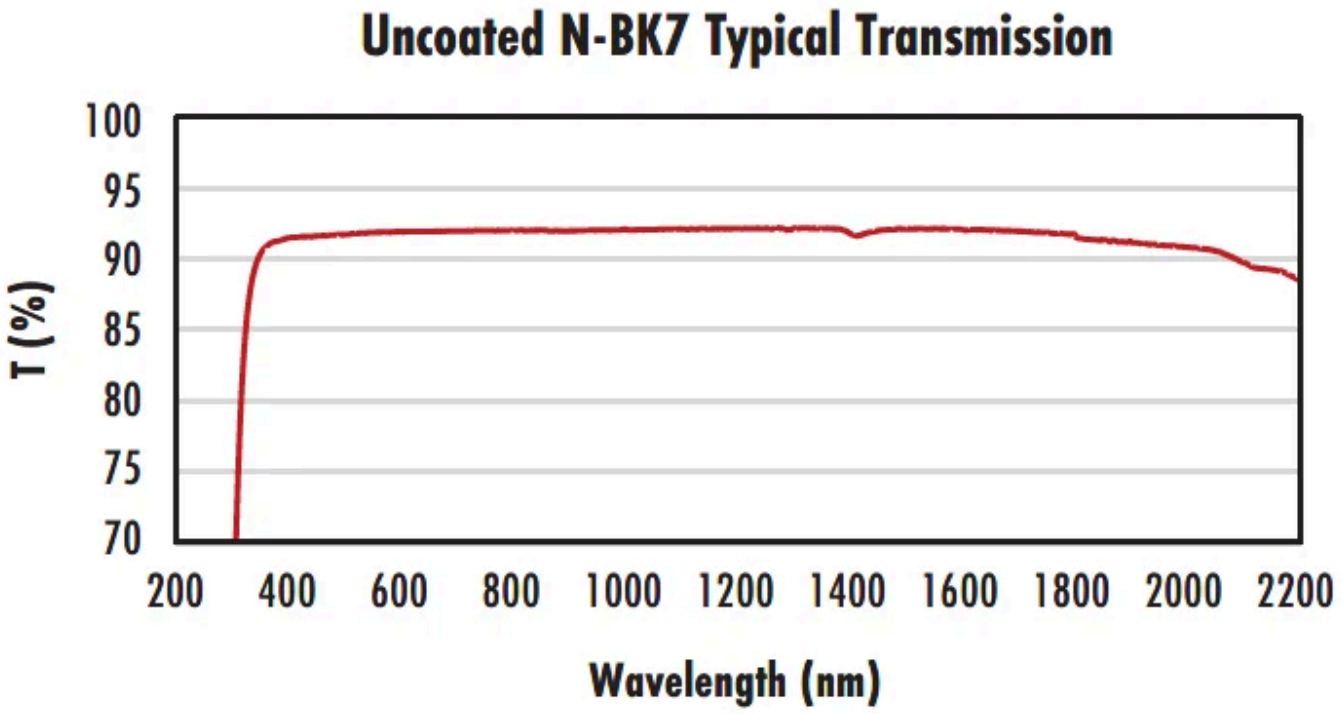
Learn more about our **custom manufacturing capabilities** or submit an inquiry **here.**

# Product Details

- AR Coated to Provide <0.4% Reflectance per Surface for 425 - 675nm
- Designed for 0° Angle of Incidence
- Various Coating Options: **Uncoated**, **VIS-EXT**, **$MgF_2$**, **VIS-NIR**, **YAG-BBAR**, **NIR I**, and **NIR II**

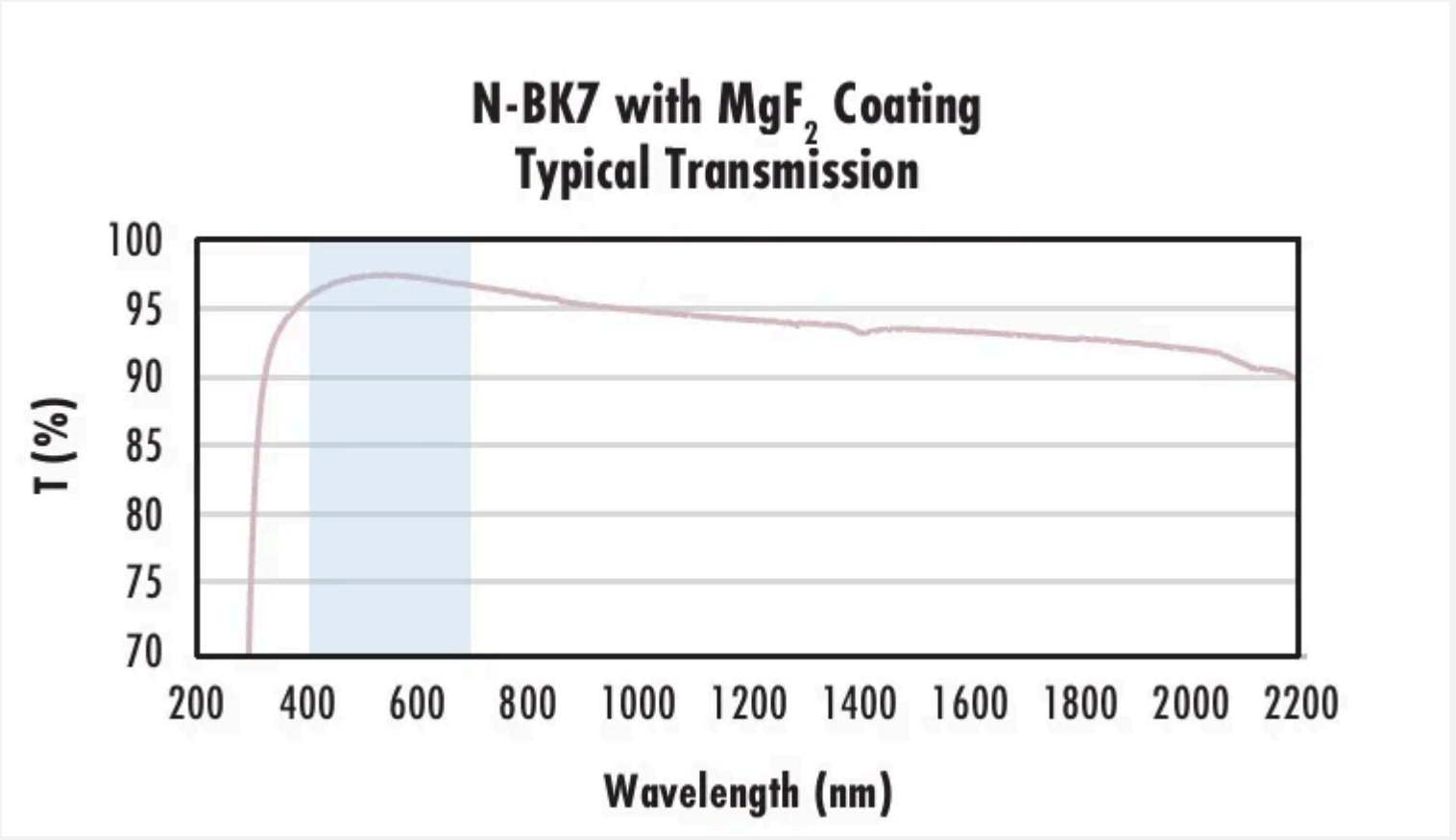
TECHSPEC® VIS 0° Coated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the output side of the lens causing this lens to have a negative focal length. These lenses can be used for balancing aberrations created by other lenses within a system due to their negative spherical aberration. Plano-Concave (PCV) lenses are commonly used in a variety of applications including image reduction, beam expansion, and telescopes. TECHSPEC VIS 0° Coated Plano-Concave (PCV) Lenses are best used in 0° angle of incidence situations and provide optimized transmission in the 425nm – 675nm range. These lenses are also available **Uncoated**, **VIS-EXT**, **$MgF_2$**, **VIS-NIR**, **YAG-BBAR**, **NIR I**, or with **NIR II** AR coating options.

# Technical Information




Typical transmission of a 3mm thick, uncoate BK7 window across the UV – NIR spectra.

**Click Here to Download Data**




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

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

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

Data outside this range is not guaranteed ar for reference only.

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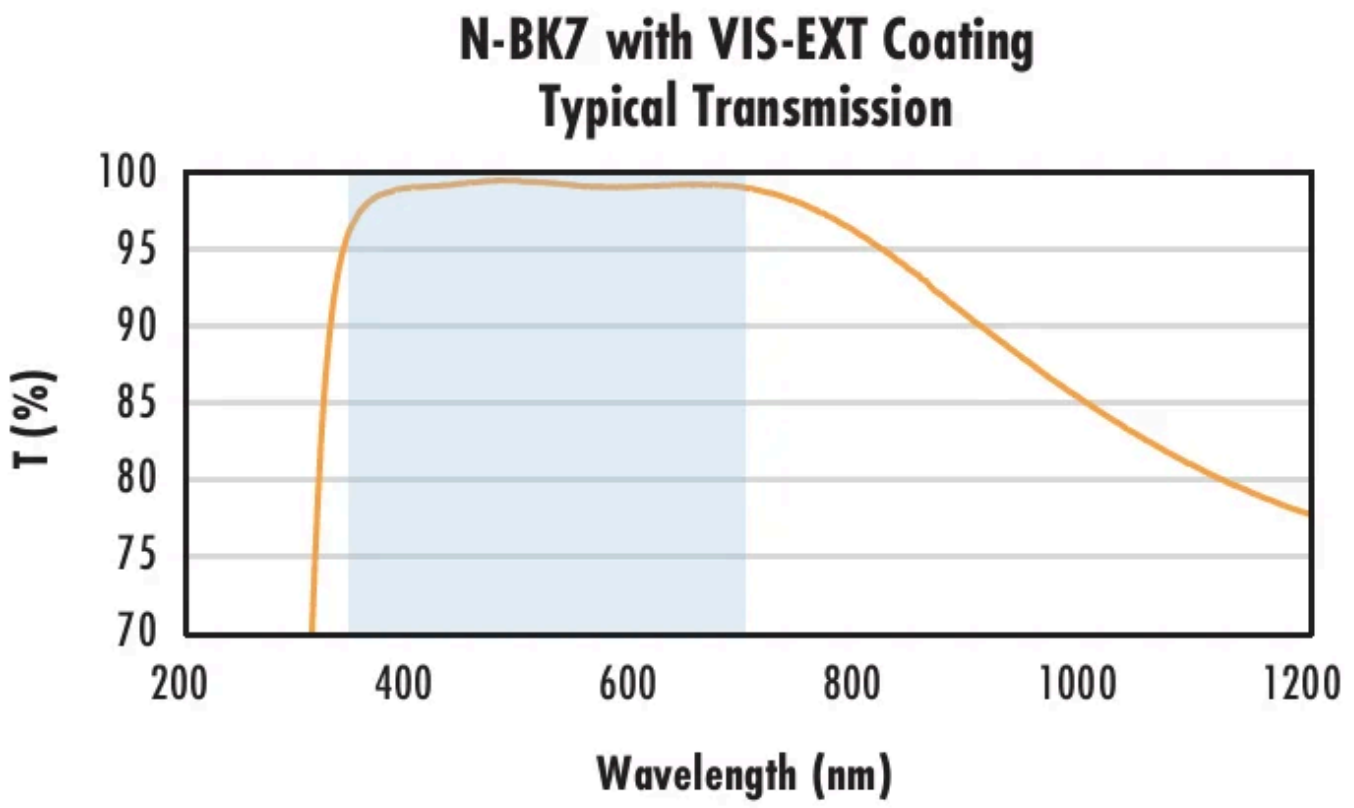


Typical transmission of a 3mm thick N-BK window with VIS-EXT (350-700nm) coating 0° AOI.

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

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

Data outside this range is not guaranteed ar for reference only.

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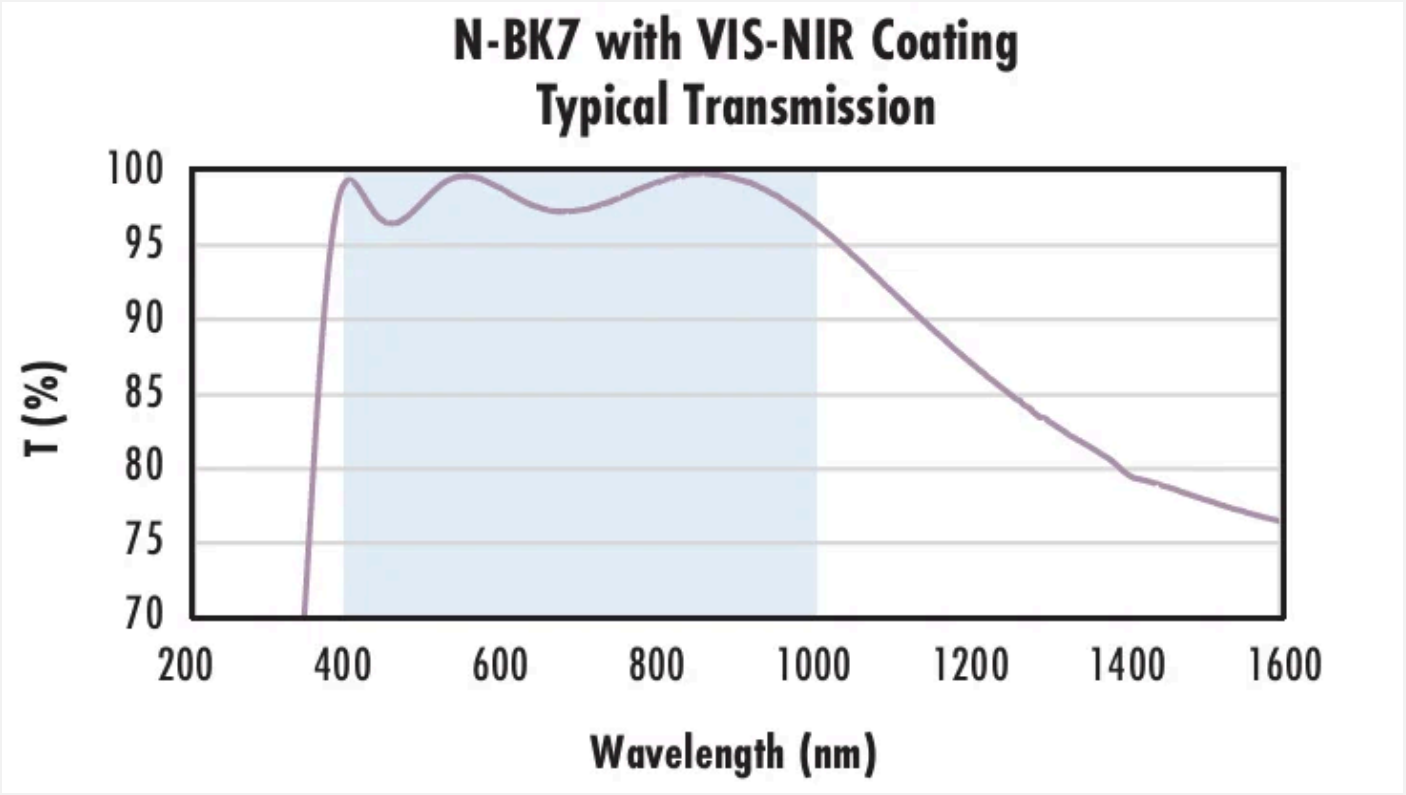


Typical transmission of a 3mm thick N-BK window with VIS-NIR (400-1000nm) coating 0° AOI.

The blue shaded region indicates the coating design wavelengh range, with th 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 ar for reference only.

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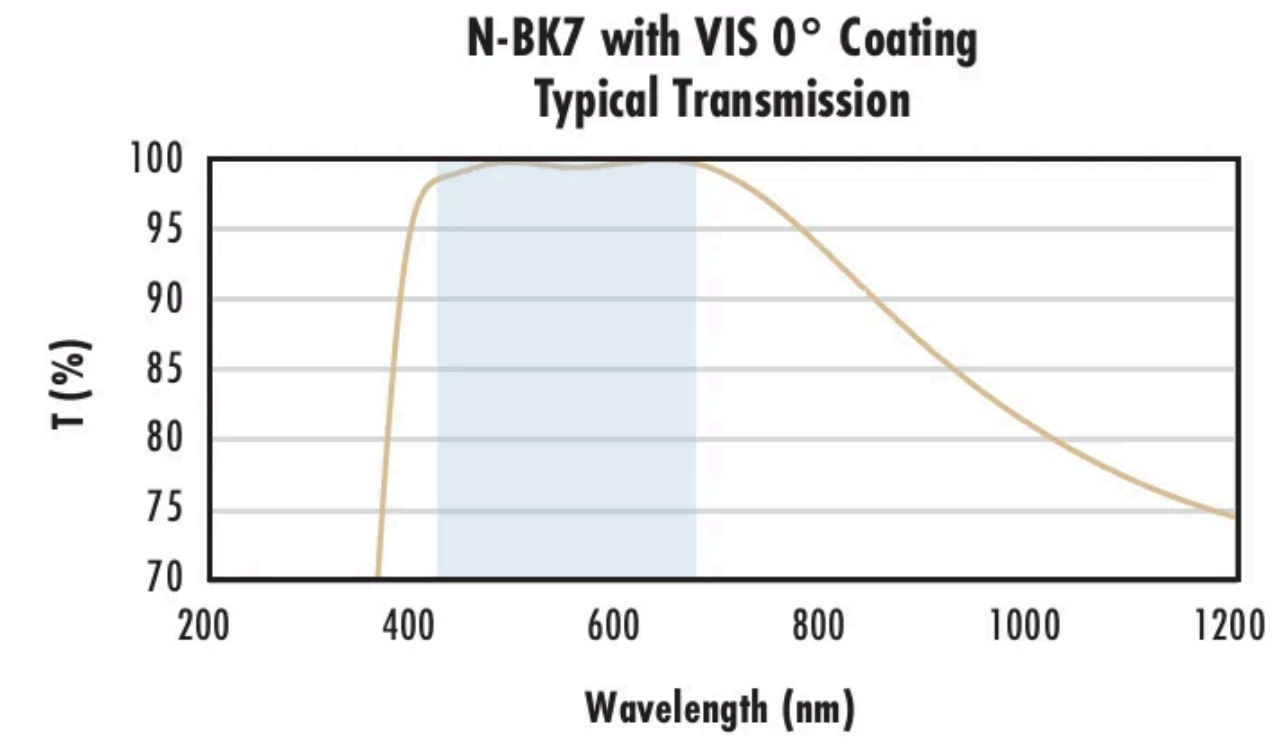


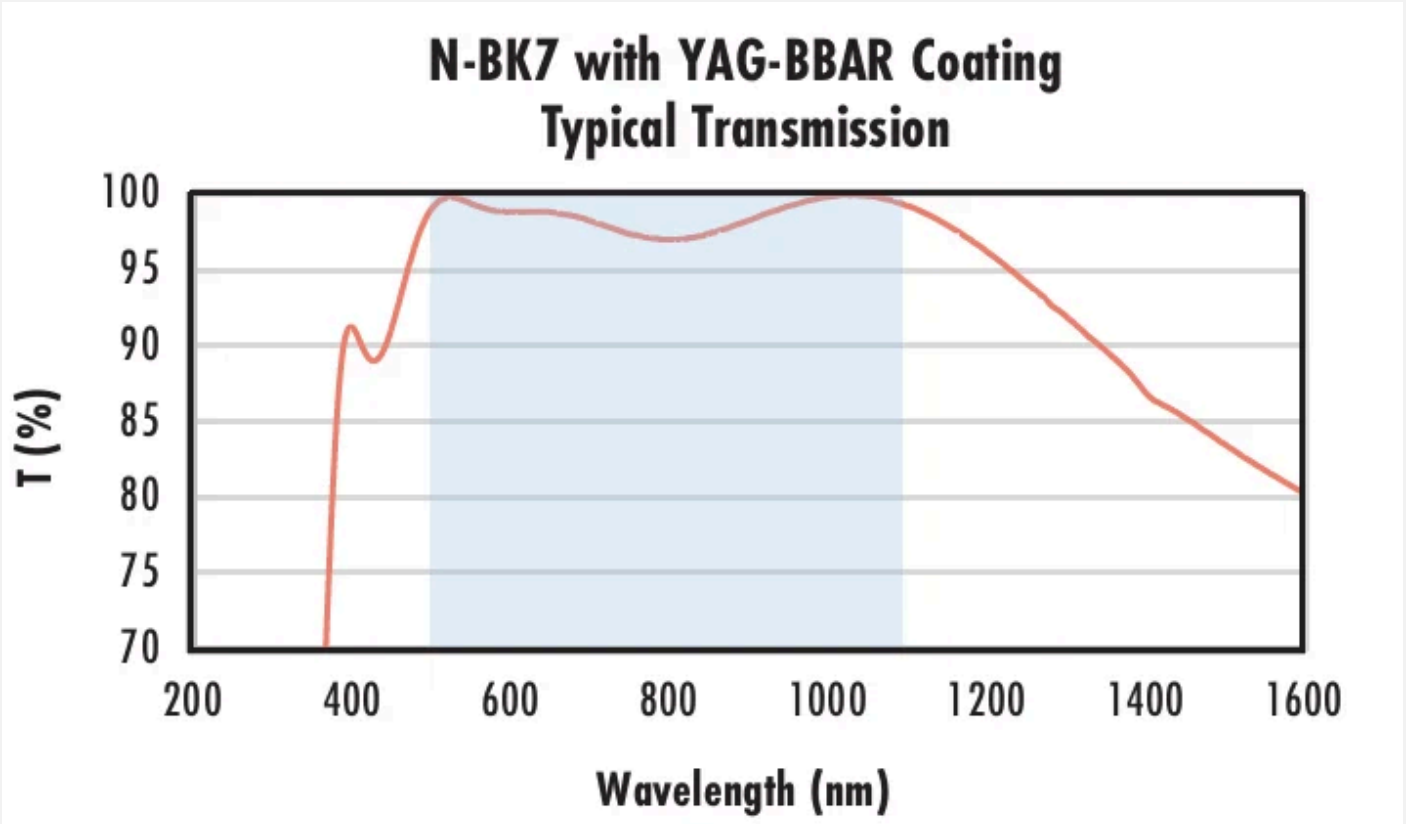

Typical transmission of a 3mm thick N-BK window with VIS 0° (425-675nm) coating 0° AOI.

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

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

Data outside this range is not guaranteed ar for reference only.

**Click Here to Download Data**




Typical transmission of a 3mm thick N-BK window with YAG-BBAR (500-1100nm) coatir 0° AOI.

The blue shaded region indicates the coating design wavelengh range, with th 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 ar for reference only.

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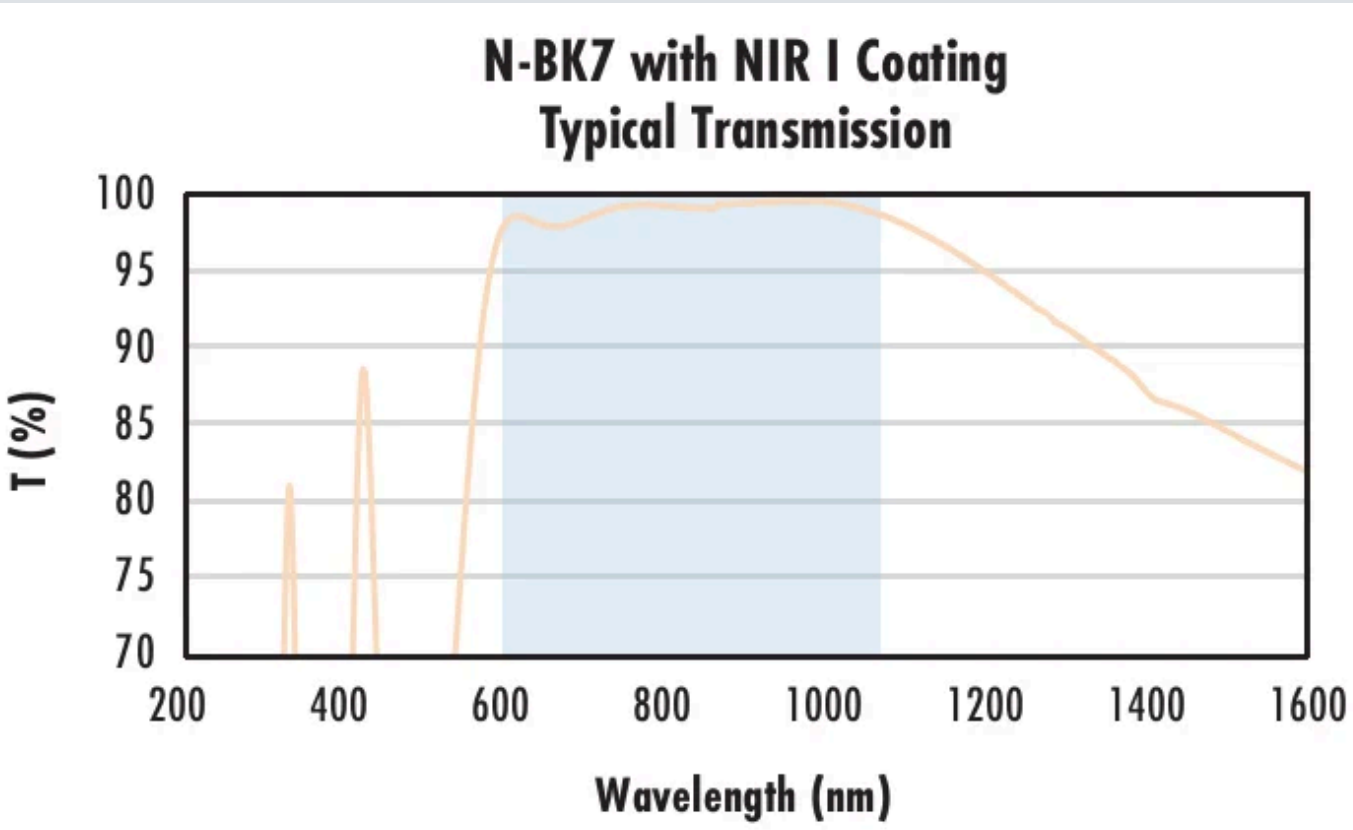


Typical transmission of a 3mm thick N-BK window with NIR I (600 - 1050nm) coating 0° AOI.

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

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

Data outside this range is not guaranteed ar for reference only.

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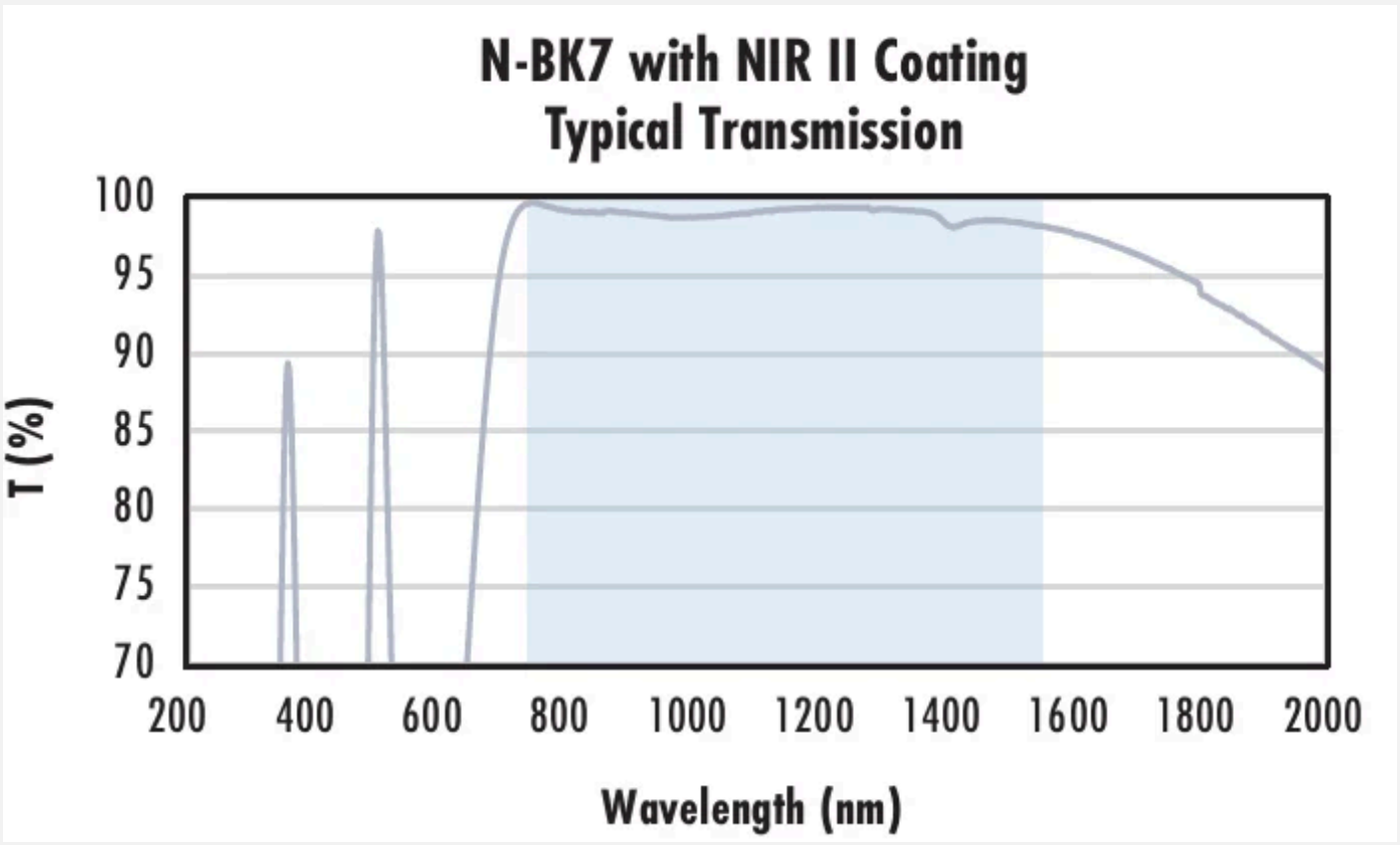


Typical transmission of a 3mm thick N-BK window with NIR II (750 - 1550nm) coating 0° AOI.

The blue shaded region indicates the coating design wavelengh range, with th 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 ar for reference only.

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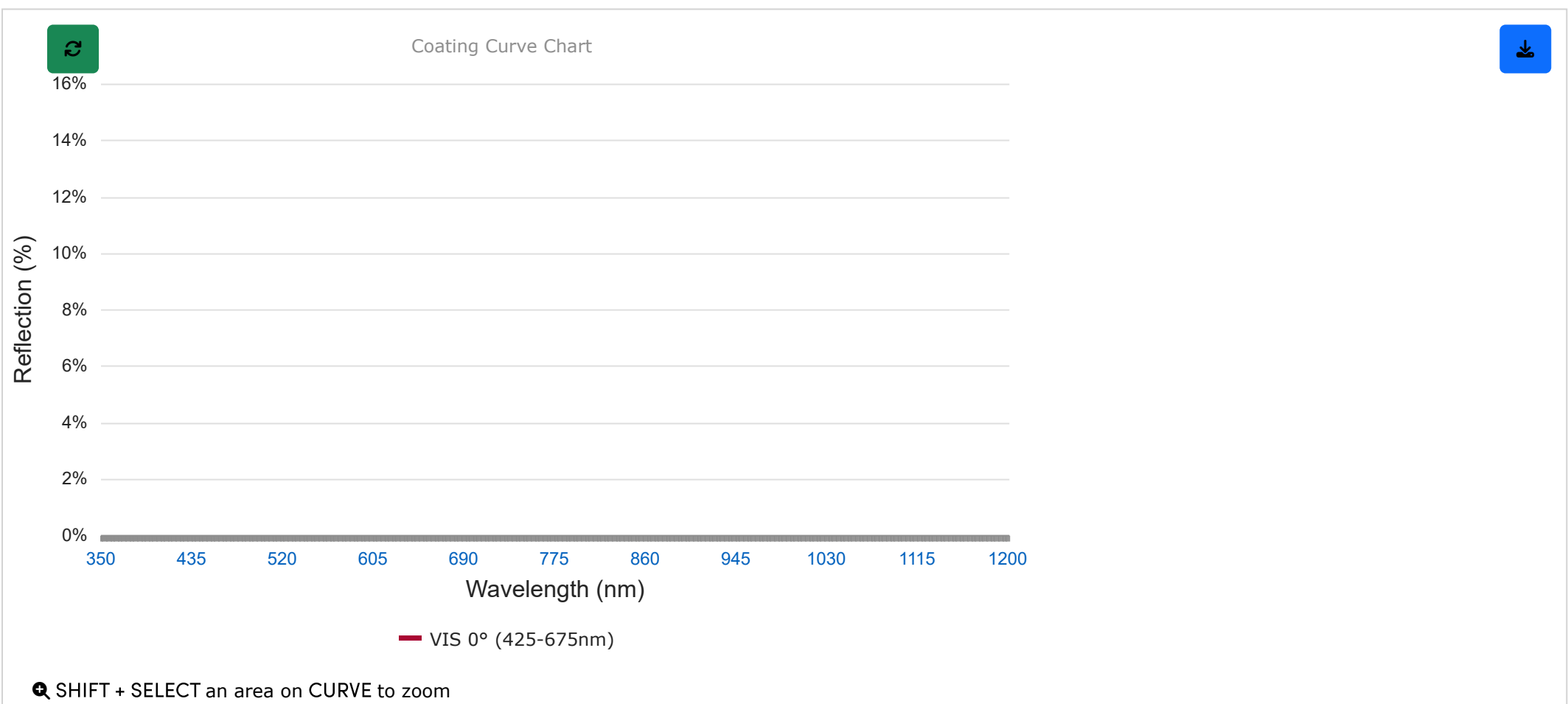
## Coating Curves

VIS 0° (425-675nm)



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

## Related Products

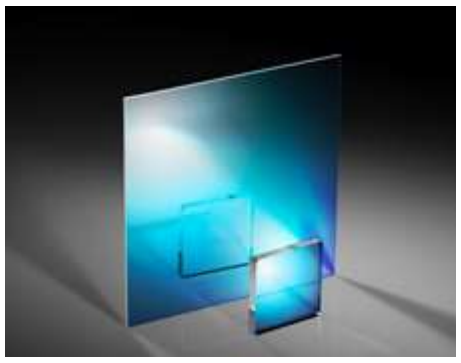
Optical Lenses

$MgF_2$ Coated Plano-Concave (PCV) Lenses

Uncoated Plano-Concave (PCV) Lenses

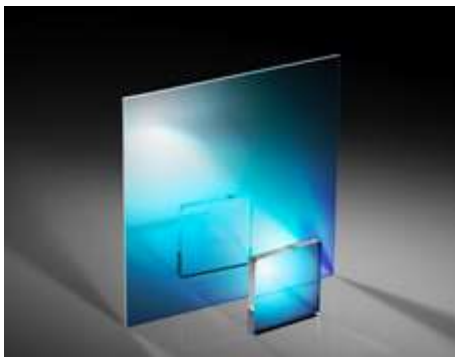
Optical Cleaning

## Frequently Purchased Together



#31-436 – 25 x 38mm, 50R/50T, Plate Beamsplitter
₹6,357

Qty



#31-437 – 25 x 38mm, 25R/75T, Plate Beamsplitter
₹6,357

Qty

#32-321 – 25mm Dia. x 40mm FL, $MgF_2$ Coated, Achromatic Doublet Lens
₹12,309

Qty

#32-323 – 25mm Dia. x 50mm FL, $MgF_2$ Coated, Achromatic Doublet Lens
₹12,309

Qty

## Compatible Mounts

| | Title | Type | Compare | Stock Number | Price ☐ | Buy |
|---|---|---|---|---|---|---|
| MORE+  | 12.0mm Optic Dia., Optic Mount | Fixed | | #64-555 | ₹3,305 Request Quote | 10 In Stock 1 |

Check out our full selection of mounts **here**.

# Resources

**Media Type**

- ☐ Application Note
- ☐ Technical Tool
- ☐ Trending in Optics
- ☐ FAQ

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Anti-Reflection (AR) Coatings

APPLICATION NOTE
An Introduction to Optical Coatings

APPLICATION NOTE
Understanding Optical Specifications

Glossary

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APPLICATION NOTE

Lens Geometry Performance Comparison

TECHNICAL TOOL

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TRENDING IN OPTICS

Future of Spherical Lenses

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