

TECHSPEC<sup>®</sup> 12mm Dia. x 18mm FL Uncoated, Double-Convex Lens



Stock **#32-012** 20+ In Stock

☐ [Other Coating Options](#)

-

1

+

£27<sup>.20</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | £27.20 each                   |
| Qty 10-24      | £24.60 each                   |
| Qty 25-99      | £21.80 each                   |
| Need More?     | <a href="#">Request Quote</a> |

!

 Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Double-Convex Lens

Type:

Physical & Mechanical Properties

|                       |                                             |
|-----------------------|---------------------------------------------|
| 12.00 +0.0/-0.025     | Diameter (mm):                              |
| <1                    | Centering (arcmin):                         |
| Protective as needed  | Bevel:                                      |
| 3.48                  | Center Thickness CT (mm):                   |
| ±0.05                 | Center Thickness Tolerance (mm):            |
| 1.42                  | Edge Thickness ET (mm):                     |
| 11.00                 | Clear Aperture CA (mm):                     |
| Optical Properties    |                                             |
| 16.81                 | Back Focal Length BFL (mm):                 |
| 18.00                 | Effective Focal Length EFL (mm):            |
| Uncoated              | Coating:                                    |
| N-BK7                 | Substrate: □                                |
| 40-20                 | Surface Quality:                            |
| 1.5λ                  | Power (P-V) @ 632.8nm:                      |
| λ/4                   | Irregularity (P-V) @ 632.8nm:               |
| 18.01                 | Radius R <sub>1</sub> =R <sub>2</sub> (mm): |
| 1.5                   | f/#:                                        |
| 587.6                 | Focal Length Specification Wavelength (nm): |
| ±1                    | Focal Length Tolerance (%):                 |
| 0.33                  | Numerical Aperture NA:                      |
| 350 - 2200            | Wavelength Range (nm):                      |
| Regulatory Compliance |                                             |
| Compliant             | RoHS 2015:                                  |
| View                  | Certificate of Conformance:                 |
| Compliant             | Reach 235:                                  |

## Product Details

- Ideal for Imaging Applications
- Minimize Aberrations Including Spherical and Coma
- [UV Fused Silica DCX Lenses](#) Available
- Anti-Reflection Coating Options: [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [NIR II](#), [VIS-EXT](#), and [YAG-BBAR](#)

TECHSPEC® Uncoated 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 canceled due to the symmetric lens design. TECHSPEC® Uncoated Double-Convex Lenses resist the effects from various aberrations in a lens design that are ultimately seen in performance and affect modulation transfer function (MTF), spot size, telecentricity, depth of field (DOF), and others. These lenses are available in a variety of substrates and coating options for the visible and NIR spectra.

## Technical Information



N-BK7

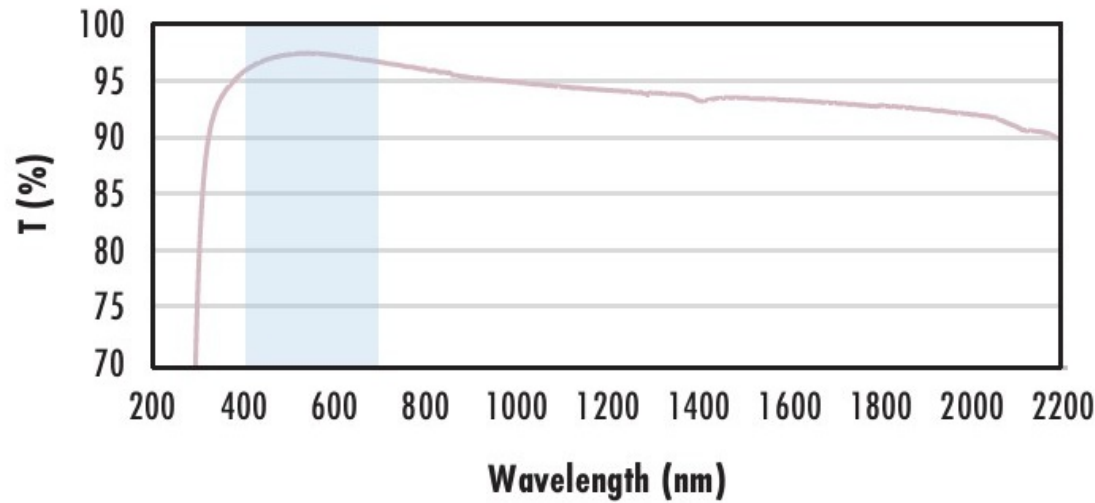
Uncoated N-BK7 Typical Transmission



Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.

[Click Here to Download Data](#)

N-BK7 with  $\text{MgF}_2$  Coating Typical Transmission



Typical transmission of a 3mm thick N-BK7 window with  $\text{MgF}_2$  (400-700nm) coating at 0° AOI.

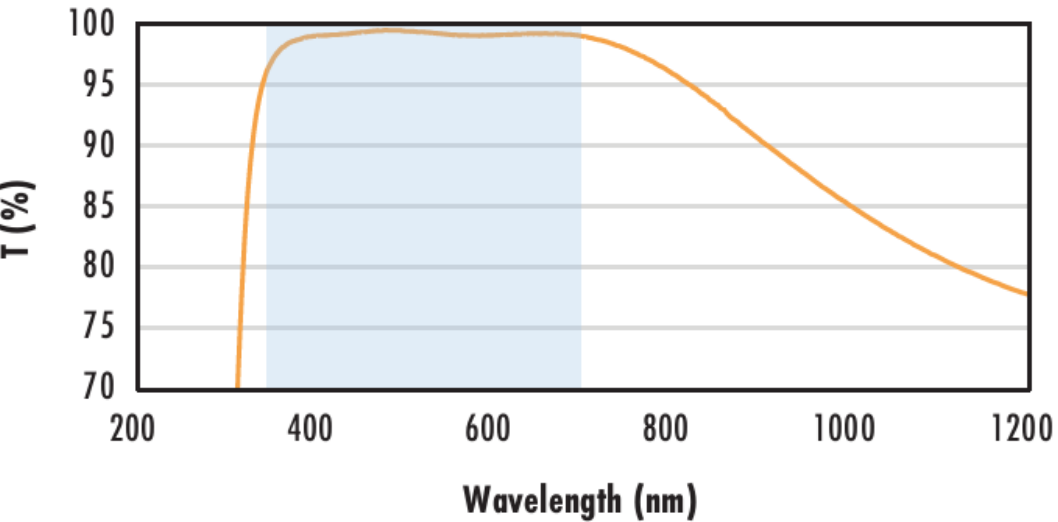
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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



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

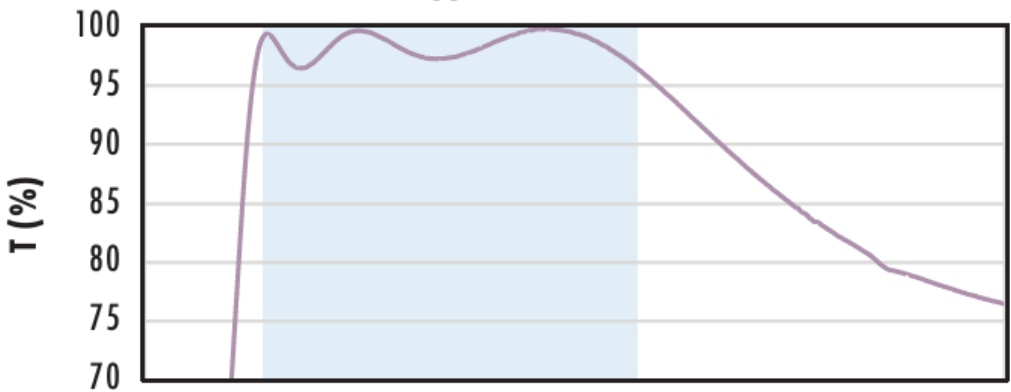
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

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:

$$\begin{aligned} R_{\text{abs}} &\leq 0.25\% \text{ @ } 880\text{nm} \\ R_{\text{avg}} &\leq 1.25\% \text{ @ } 400 - 870\text{nm} \\ R_{\text{avg}} &\leq 1.25\% \text{ @ } 890 - 1000\text{nm} \end{aligned}$$

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

[Click Here to Download Data](#)



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

;