

TECHSPEC<sup>®</sup> 20.0mm Dia. x -30 FL, YAG-BBAR, Plano-Concave Lens



Stock #21-315 3 In Stock

-

1

+

€53<sup>50</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-9        | €53,50 each                   |
| Qty 10-25      | €48,00 each                   |
| Qty 26-49      | €42,75 each                   |
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 Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Type:

Plano-Concave Lens

Physical & Mechanical Properties

Diameter (mm):

|                           |        |
|---------------------------|--------|
| 20.00                     |        |
|                           | Bevel: |
| Protective as needed      |        |
|                           |        |
| Center Thickness CT (mm): |        |
| 3.50 ±0.10                |        |
|                           |        |
| Centering (arcmin):       |        |
| <1                        |        |
|                           |        |
| Clear Aperture CA (mm):   |        |
| 19.00                     |        |
|                           |        |
| Edge Thickness ET (mm):   |        |
| 5.39                      |        |

| Optical Properties                                                                                           |  |
|--------------------------------------------------------------------------------------------------------------|--|
|                                                                                                              |  |
| Effective Focal Length EFL (mm):                                                                             |  |
| -30.00                                                                                                       |  |
|                                                                                                              |  |
| Substrate: <input type="checkbox"/>                                                                          |  |
| N-SF11                                                                                                       |  |
|                                                                                                              |  |
| f##:                                                                                                         |  |
| 1.5                                                                                                          |  |
|                                                                                                              |  |
| Numerical Aperture NA:                                                                                       |  |
| 0.33                                                                                                         |  |
|                                                                                                              |  |
| Coating:                                                                                                     |  |
| YAG-BBAR (500-1100nm)                                                                                        |  |
|                                                                                                              |  |
| Wavelength Range (nm):                                                                                       |  |
| 500 - 1100                                                                                                   |  |
|                                                                                                              |  |
| Back Focal Length BFL (mm):                                                                                  |  |
| -31.96                                                                                                       |  |
|                                                                                                              |  |
| Coating Specification:                                                                                       |  |
| R <sub>abs</sub> <0.25% @ 532nm<br>R <sub>abs</sub> <0.25% @ 1064nm<br>R <sub>avg</sub> <1.0% @ 500 - 1100nm |  |
|                                                                                                              |  |
| Focal Length Specification Wavelength (nm):                                                                  |  |
| 587.6                                                                                                        |  |
|                                                                                                              |  |
| Focal Length Tolerance (%):                                                                                  |  |
| ±1                                                                                                           |  |
|                                                                                                              |  |
| Radius R <sub>1</sub> (mm):                                                                                  |  |
| -23.54                                                                                                       |  |
|                                                                                                              |  |
| Surface Quality:                                                                                             |  |
| 40-20                                                                                                        |  |
|                                                                                                              |  |
| Damage Threshold, By Design: <input type="checkbox"/>                                                        |  |
| 5 J/cm² @ 532nm, 10ns                                                                                        |  |
|                                                                                                              |  |
| Power (P-V) @ 632.8nm:                                                                                       |  |
| 1.5λ                                                                                                         |  |
|                                                                                                              |  |
| Irregularity (P-V) @ 632.8nm:                                                                                |  |
| λ/4                                                                                                          |  |

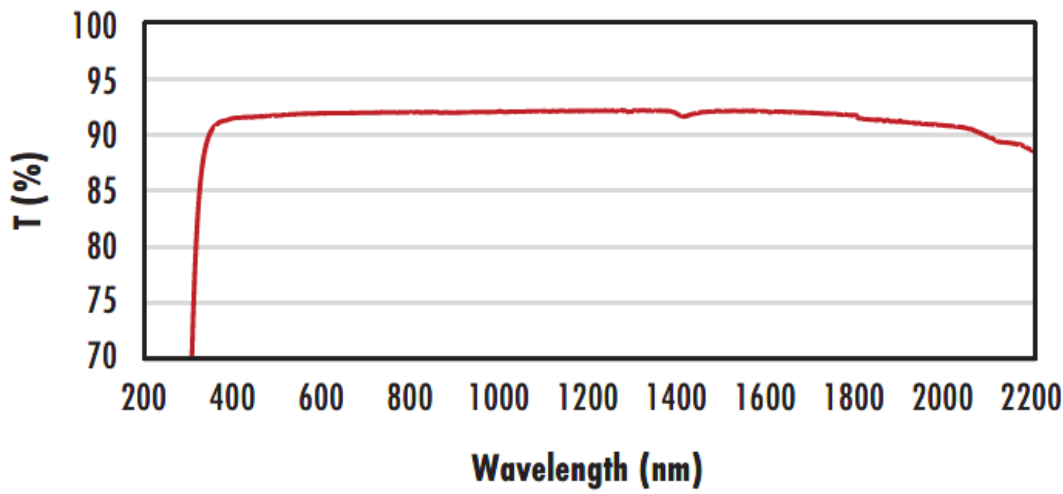
| Regulatory Compliance |                             |
|-----------------------|-----------------------------|
|                       |                             |
| Compliant             | RoHS 2015:                  |
|                       |                             |
| View                  | Certificate of Conformance: |
|                       |                             |
| Compliant             | Reach 235:                  |

## Product Details

- Negative Focal Lengths for Beam Expansion or Light Projection Applications
  - Optimized for R<0.25% at both 532nm and 1064nm
  - AR Coated to Provide <1.0% Reflectance per Surface for 500 - 1100nm
  - Various Coating Options: [Uncoated](#), [VIS-EXT](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [NIR II](#), and [1064nm V-Coat](#)
- TECHSPEC® YAG-BBAR 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® YAG-BBAR Coated Plano-Concave (PCV) Lenses feature less than 0.25% reflection at common Nd:YAG laser wavelengths of 532nm and 1064nm. These lenses are also available [Uncoated](#), [VIS-EXT](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), or with [NIR II](#) AR coating options.

## Technical Information

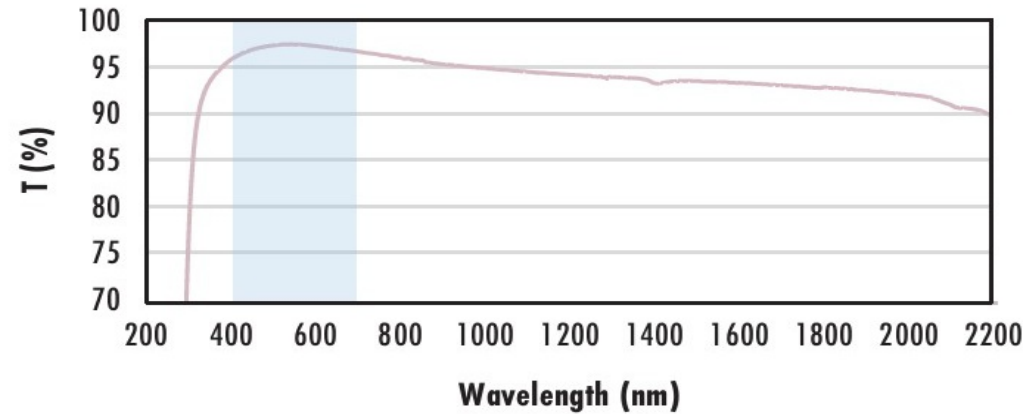
| N-BK7                               |  |
|-------------------------------------|--|
|                                     |  |
| Uncoated N-BK7 Typical Transmission |  |
|                                     |  |



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

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**N-BK7 with MgF<sub>2</sub> Coating  
Typical Transmission**



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

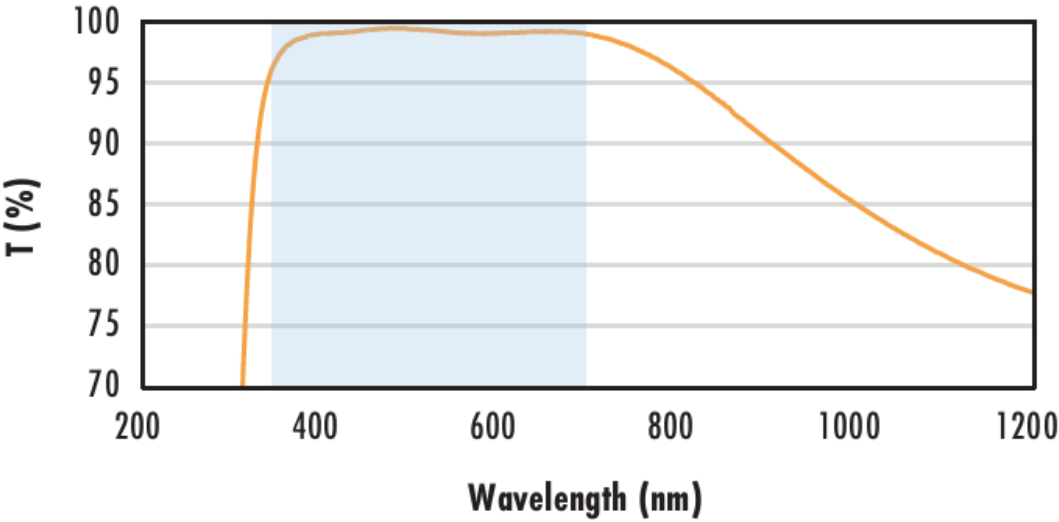
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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**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.

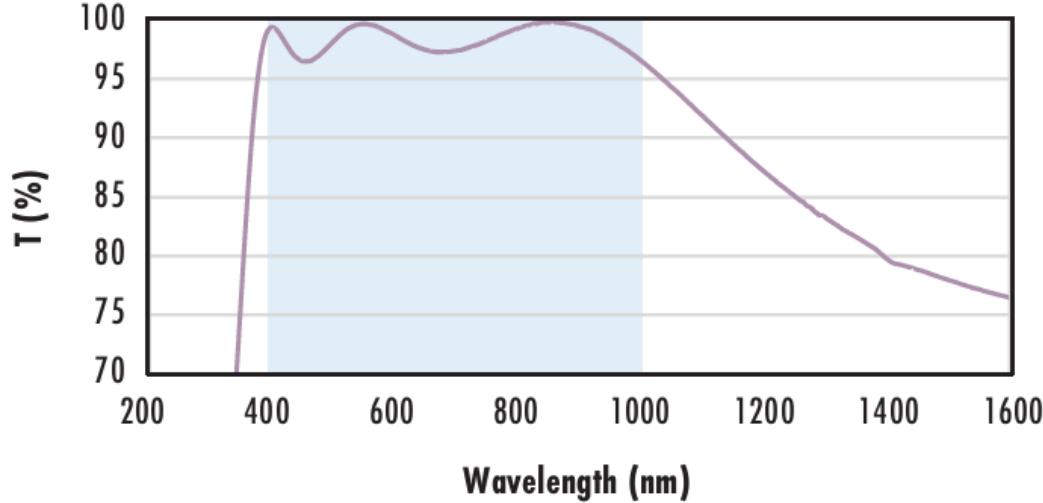
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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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.

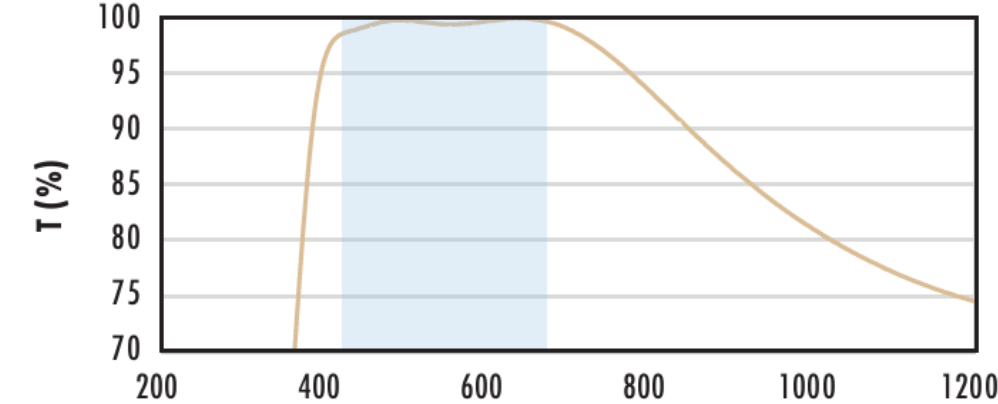
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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**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.

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