

**TECHSPEC®**

## Doppelkonvexe Linse, 4,5 mm D. x 4,5 mm BW, geschwärzt, VIS-EXT-Beschichtung



Produkt **#89-122** **16 In Stock**

[Andere Beschichtungen](#)

1  €74<sup>00</sup>

**+ WARENKORB**

Mengenrabatte	
Stk. 1-9	€74,00 stückpreis
Stk. 10-24	€67,00 stückpreis
Stk. 25-99	€59,00 stückpreis
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! Preise exklusiv der geltenden Mehrwertsteuer und Abgaben

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### Produktdetails

Double-Convex Lens **Typ:**

### Physikalische und mechanische Eigenschaften

4.50 +0.000/-0.025	<b>Durchmesser (mm):</b>
30-45, typical	<b>Zentrierung (Bogenminuten):</b>
Protective as needed	<b>Fase:</b>
2.60	<b>Mittendicke CT (mm):</b>
±0.05	<b>Toleranz Mittendicke (mm):</b>
1.8	<b>Randdicke ET (mm):</b>
4.05	<b>Freie Apertur CA (mm):</b>

## Optische Eigenschaften

3.7	<b>Hintere Brennweite BFL (mm):</b>
4.50	<b>Effektive Brennweite EFL (mm):</b>
VIS-EXT (350-700nm)	<b>Beschichtung:</b>
R <sub>avg</sub> <0.5% @ 350 - 700nm	<b>Beschichtungsspezifikation:</b>
<a href="#">N-LASF44</a>	<b>Substrat:</b> □
40-20	<b>Oberflächenqualität:</b>
1.5λ	<b>Power (P-V) @ 632,8 nm:</b>
λ/4	<b>Unregelmäßigkeit (P-V) @ 632,8 nm:</b>
6.58	<b>Radius R<sub>1</sub>=R<sub>2</sub> (mm):</b>
1	<b>Blende:</b>
587.6	<b>Designwellenlänge Brennweite (nm):</b>
±1	<b>Toleranz Brennweite (%):</b>
0.50	<b>Numerische Apertur NA:</b>
350 - 700	<b>Wellenlängenbereich (nm):</b>

## Konformität mit Standards

<a href="#">Konform</a>	<b>RoHS 2015:</b>
<a href="#">Anzeigen</a>	<b>Konformitätszertifikat:</b>
<a href="#">Konform</a>	<b>Reach 235:</b>

## Produktdetails

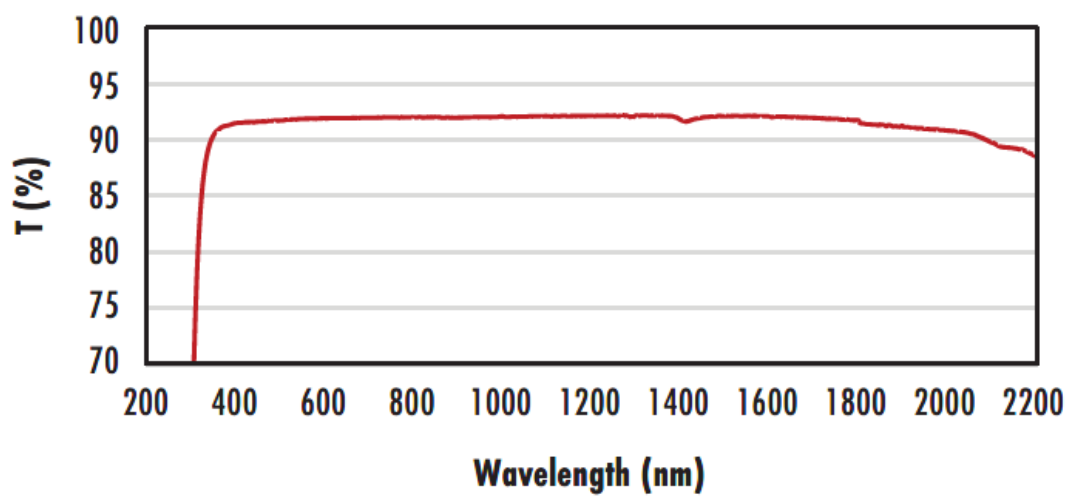
- AR-beschichtet für <0,5% Reflexion pro Oberfläche zwischen 350 - 700 nm
- Minimieren Aberrationen wie sphärische Aberration oder Koma
- [DCX-Linsen aus UV-Quarzglas](#) sind ebenfalls verfügbar
- Weitere Beschichtungen verfügbar: [Unbeschichtet](#), [MgF<sub>2</sub>](#), [VIS 0°](#), [VIS-NIR](#), [NIR I](#), [NIR II](#) und [YAG-BBAR](#)

Die TECHSPEC® DCX-Linsen mit AR-Beschichtung VIS-EXT, auch bikonvexe Linsen genannt, haben zwei positive, symmetrische Oberflächen mit gleichem Krümmungsradius auf beiden Seiten. Die Linsen werden generell für Bildgebungen mit endlichem Abstand und Konjugiertenverhältnis (Verhältnis zwischen Objekt- und Bildweite) zwischen 0,2 und 5 empfohlen. Bei einem Konjugiertenverhältnis von 1 sind Aberrationen wie sphärische Aberration, chromatische Aberration, Koma und Verzeichnung aufgrund des symmetrischen Linsendesigns minimiert oder sogar ganz eliminiert. Die TECHSPEC® doppelkonvexen Linsen sind mit verschiedenen Substraten und verschiedenen Beschichtungsoptionen für VIS und NIR verfügbar.

## Technische Informationen

N-BK7

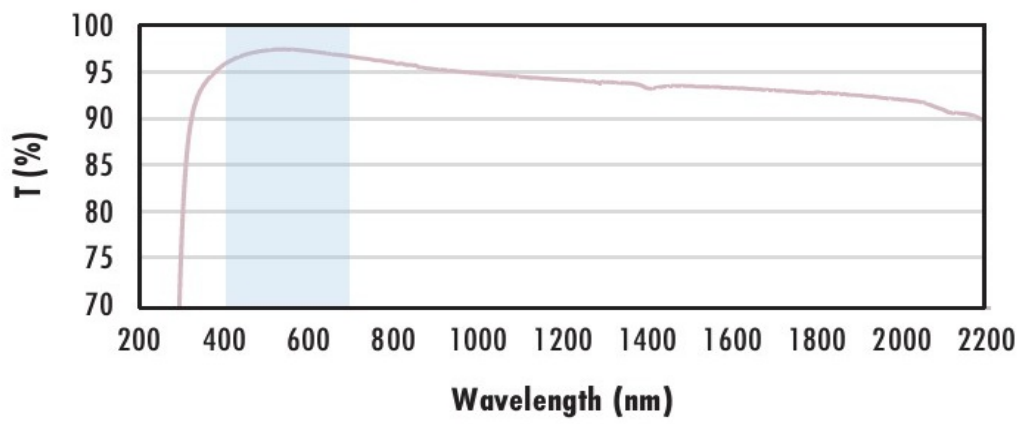
**Uncoated N-BK7 Typical Transmission**



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

[Click Here to Download Data](#)

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



Typical transmission of a 3mm thick N-BK7 window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.

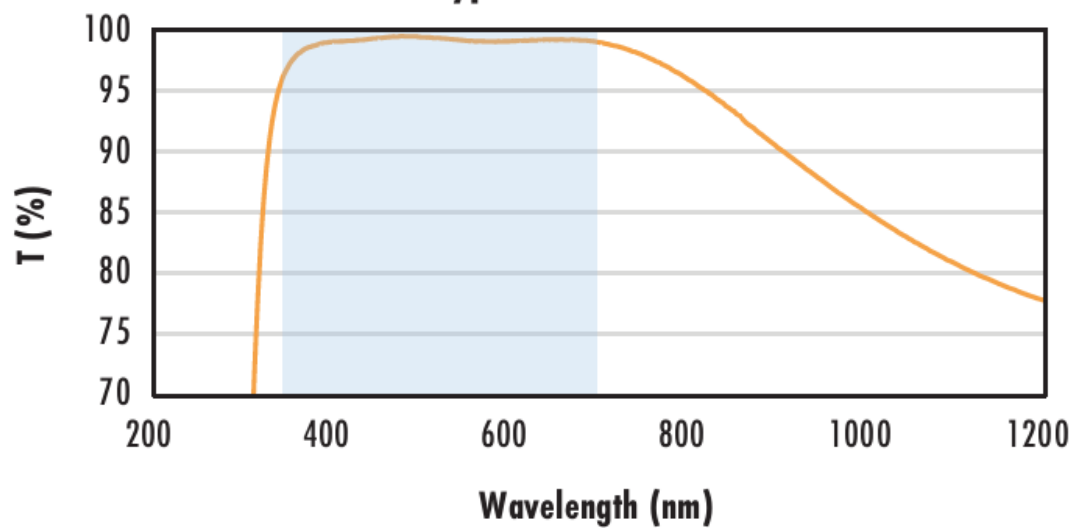
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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.

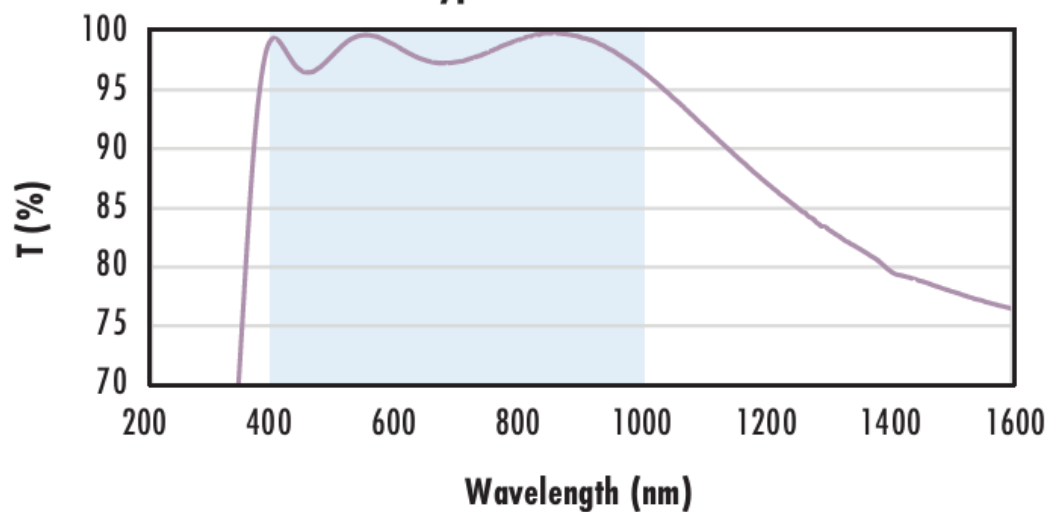
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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:

$$R_{abs} \leq 0.25\% @ 880\text{nm}$$

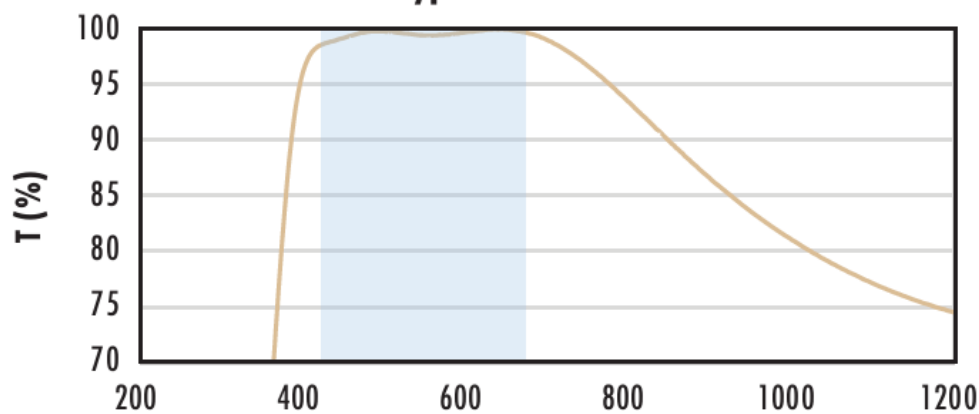
$$R_{avg} \leq 1.25\% @ 400 - 870\text{nm}$$

$$R_{avg} \leq 1.25\% @ 890 - 1000\text{nm}$$

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:

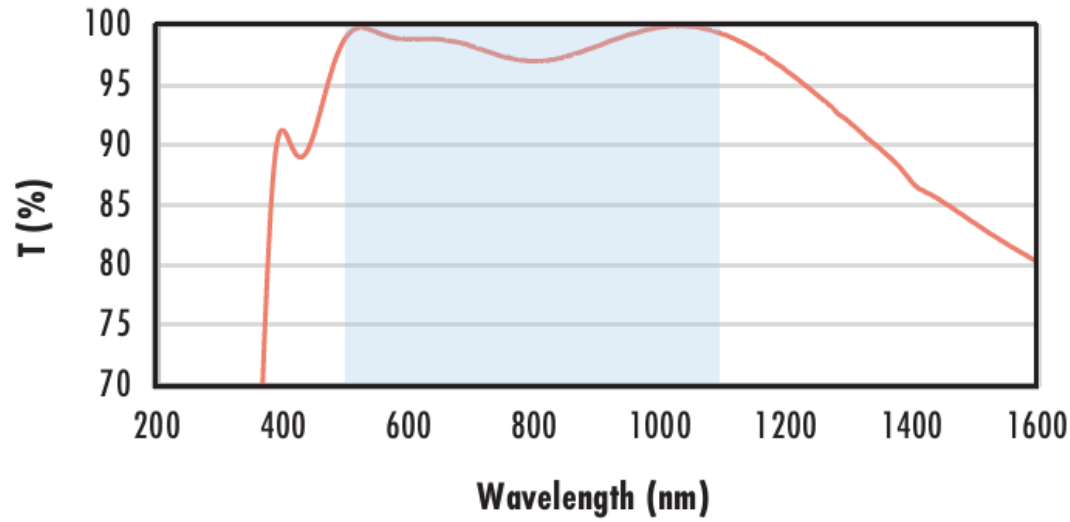
$$R_{avg} \leq 0.4\% @ 425 - 675\text{nm}$$

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

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Wavelength (nm)

### 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.

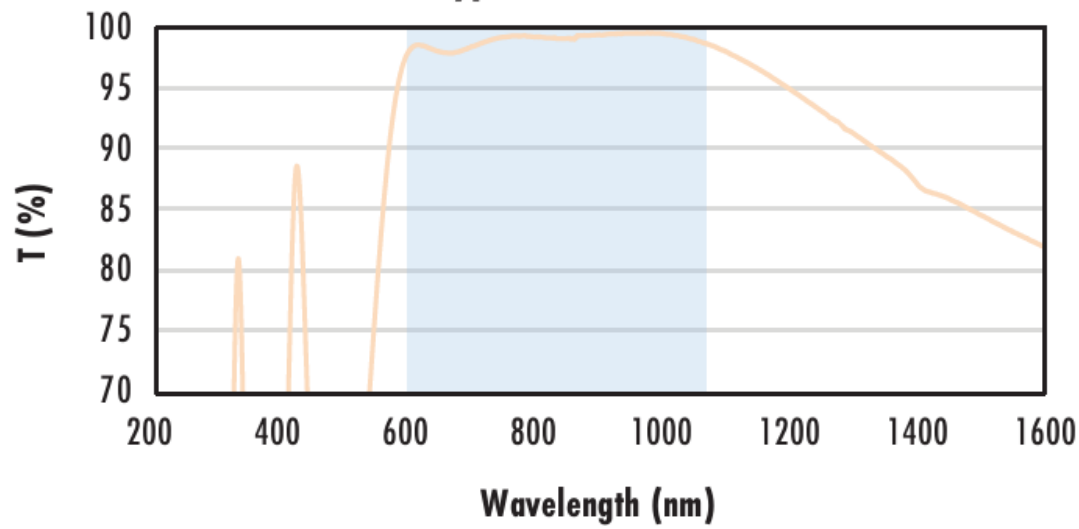
The blue shaded region indicates the coating design wavelength range, with the following specification:

$$\begin{aligned} R_{\text{abs}} &\leq 0.25\% @ 532\text{nm} \\ R_{\text{abs}} &\leq 0.25\% @ 1064\text{nm} \\ R_{\text{avg}} &\leq 1.0\% @ 500 - 1100\text{nm} \end{aligned}$$

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

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### 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.

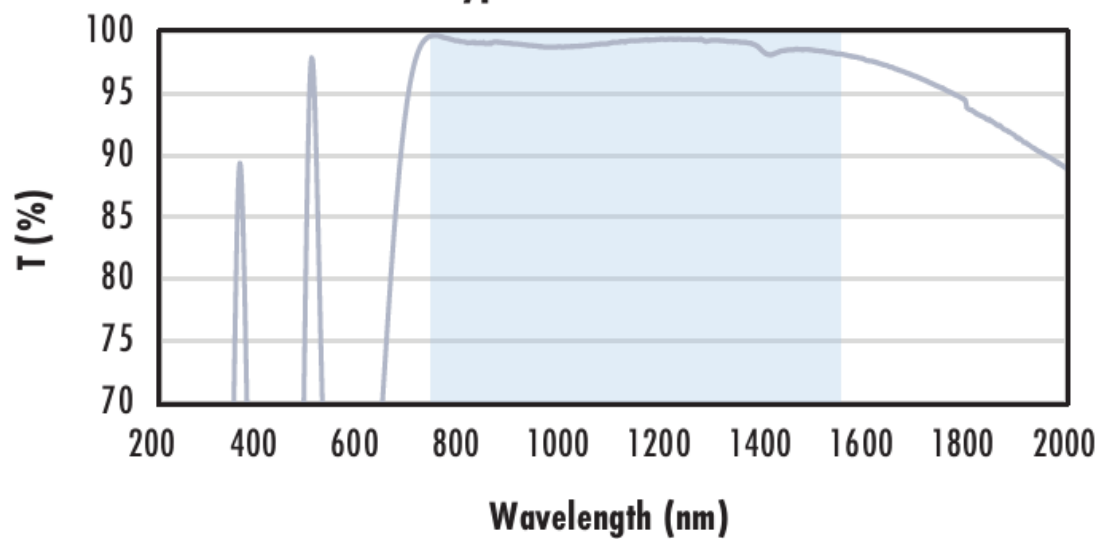
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

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### 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:

$$\begin{aligned} R_{\text{abs}} &\leq 1.5\% @ 750 - 800\text{nm} \\ R_{\text{abs}} &\leq 1.0\% @ 800 - 1550\text{nm} \\ R_{\text{avg}} &\leq 0.7\% @ 750 - 1550\text{nm} \end{aligned}$$

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

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