

**TECHSPEC®**

**Doppelkonvexe Linse aus UV-Quarzglas, 18 mm D. x 20 mm eff. BW, UV-AR-beschichtet**



UV Fused Silica Double-Convex (DCX) Lenses



Produkt **#46-290** **20+ In Stock**

[Andere Beschichtungen](#)

- 1 + €162<sup>00</sup>

**+ WARENKORB**

Mengenrabatte	
Stk. 1-5	€162,00 stückpreis
Stk. 6-25	€130,00 stückpreis
Stk. 26-49	€121,00 stückpreis
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ⓘ Preise exklusiv der geltenden Mehrwertsteuer und Abgaben

Downloadbereich

**Produktdetails**

Double-Convex Lens **Typ:**

## Physikalische und mechanische Eigenschaften

Durchmesser (mm):  
18.00 +0.0/-0.025

Zentrierung (Bogenminuten):  
<1

Fase:  
Protective as needed

Mittendicke CT (mm):  
7.64 ±0.10

Randdicke ET (mm):  
2.50

Freie Apertur CA (mm):  
17.00

## Optische Eigenschaften

Hintere Brennweite BFL (mm):  
17.18

Effektive Brennweite EFL (mm):  
20.00

Beschichtung:  
UV-AR (250-425nm)

Beschichtungsspezifikation:  
R<sub>abs</sub> ≤1.0% @ 250 - 425nm  
R<sub>avg</sub> ≤0.75% @ 250 - 425nm  
R<sub>avg</sub> ≤0.5% @ 370 - 420nm

Substrat:   
Fused Silica (Corning 7980)

Oberflächenqualität:  
40-20

Power (P-V) @ 632,8 nm:  
1.5λ

Unregelmäßigkeit (P-V) @ 632,8 nm:  
λ/4

Radius R<sub>1</sub>=R<sub>2</sub> (mm):  
17.05

Blende:  
1.11

Designwellenlänge Brennweite (nm):  
587.6

Toleranz Brennweite (%):  
±1

Numerische Apertur NA:  
0.45

Wellenlängenbereich (nm):  
250 - 425

Zerstörschwelle, Referenz:   
3 J/cm<sup>2</sup> @ 355nm, 10ns

## Konformität mit Standards

RoHS 2015:  
Konform

Reach 219:  
Konform

Konformitätszertifikat:  
Anzeigen

## Gewünschte Spezifikationen nicht dabei?

Edmund Optics bietet einen umfangreichen kundenspezifischen Fertigungsservice für Optik- und Bildverarbeitungskomponenten an, speziell hergestellt für Ihre Anwendungsanforderungen. Wir ermöglichen flexible Lösungen für Ihre Bedürfnisse – von der Prototypenphase bis zur Serienfertigung. Unsere erfahrenen IngenieurInnen freuen sich auf die Zusammenarbeit und unterstützen Sie bei jedem Projektschritt.

Unser Service beinhaltet:

- Kundenspezifische Abmessungen, Materialien und mehr
- Hochpräzise Oberflächenqualität und -ebenheit
- Enge Toleranzen und komplexe Formen
- Skalierbare Produktion – vom Prototypen zur Serie

Erfahren Sie mehr über unsere [kundenspezifischen Fertigungsmöglichkeiten](#) oder senden Sie [hier](#) eine Anfrage.

## Produktdetails

- Ideal für die Bildgebung
- Minimieren Aberrationen wie sphärische Aberration oder Koma
- Präzises Substrat aus Quarzglas

Die TECHSPEC® doppelkonvexen Linsen (DCX-Linsen) aus UV-Quarzglas, 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.

## Technische Informationen



UV FS Transmission Curve

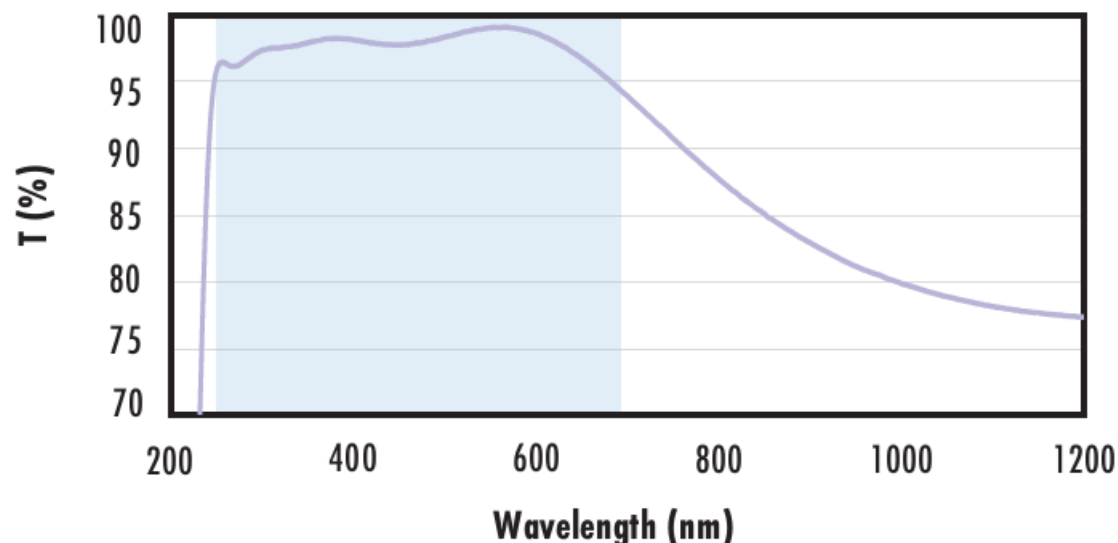
FUSED SILICA	
<p style="text-align: center;"><b>Uncoated Fused Silica Typical Transmission</b></p> <p>The graph shows typical transmission for a 3mm thick uncoated fused silica window. The y-axis is Transmittance T (%) from 70 to 100. The x-axis is Wavelength (nm) from 200 to 2200. The curve is flat at approximately 93% transmittance across the entire range, with a small dip at 1400nm.</p>	<p>Typical transmission of a 3mm thick, uncoated fused silica window across the UV - NIR spectra.</p> <p style="text-align: center;"><a href="#">Click Here to Download Data</a></p>
<p style="text-align: center;"><b>Fused Silica with MgF<sub>2</sub> Coating Typical Transmission</b></p> <p>The graph shows typical transmission for a 3mm thick fused silica window with MgF<sub>2</sub> coating. The y-axis is Transmittance T (%) from 70 to 100. The x-axis is Wavelength (nm) from 200 to 2200. A blue shaded region from 400nm to 700nm indicates the coating design range. Transmittance is ~93% outside this range and ~97% inside.</p>	<p>Typical transmission of a 3mm thick fused silica window with MgF<sub>2</sub> (400-700nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p style="text-align: center;"><math>R_{avg} \leq 1.75\% @ 400 - 700\text{nm}</math> (N-BK7)</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p style="text-align: center;"><a href="#">Click Here to Download Data</a></p>
<p style="text-align: center;"><b>Fused Silica with UV-AR Coating Typical Transmission</b></p> <p>The graph shows typical transmission for a 3mm thick fused silica window with UV-AR coating. The y-axis is Transmittance T (%) from 85 to 100. The x-axis is Wavelength (nm) from 200 to 2200. A blue shaded region from 250nm to 425nm indicates the coating design range. Transmittance is ~98% in this range and drops to ~85% at 2200nm.</p>	<p>Typical transmission of a 3mm thick fused silica window with UV-AR (250-425nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p style="text-align: center;"><math>R_{abs} \leq 1.0\% @ 250 - 425\text{nm}</math>  <math>R_{avg} \leq 0.75\% @ 250 - 425\text{nm}</math>  <math>R_{avg} \leq 0.5\% @ 370 - 420\text{nm}</math></p>



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

[Click Here to Download Data](#)

### Fused Silica with UV-VIS Coating Typical Transmission



Typical transmission of a 3mm thick fused silica window with UV-VIS (250-700nm) coating at 0° AOI.

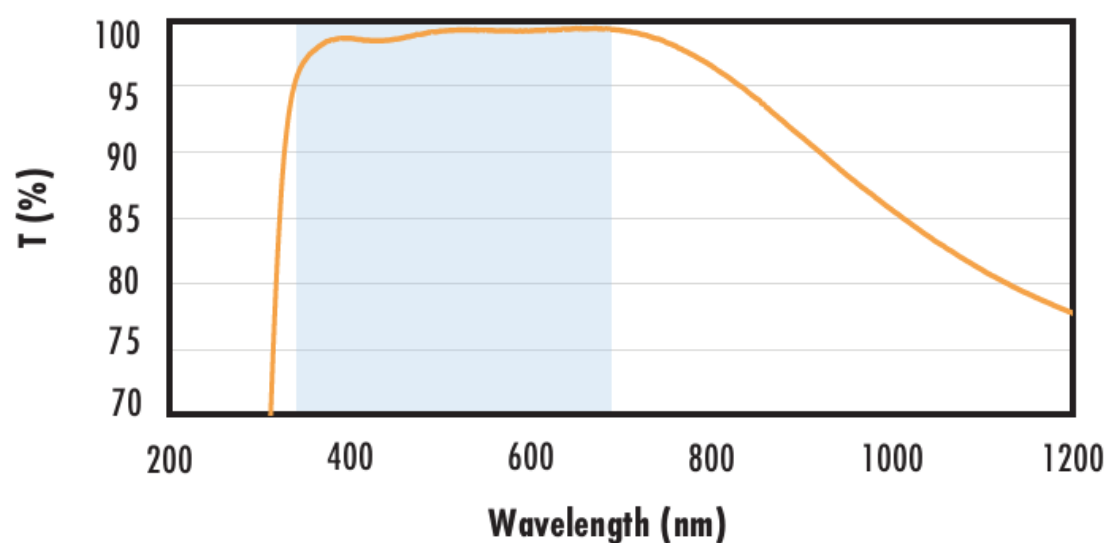
The blue shaded region indicates the coating design wavelength range, with the following specification:

$R_{abs} \leq 1.0\%$  @ 350 - 450nm  
 $R_{avg} \leq 1.5\%$  @ 250 - 700nm

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

[Click Here to Download Data](#)

### Fused Silica with VIS-EXT Coating Typical Transmission



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

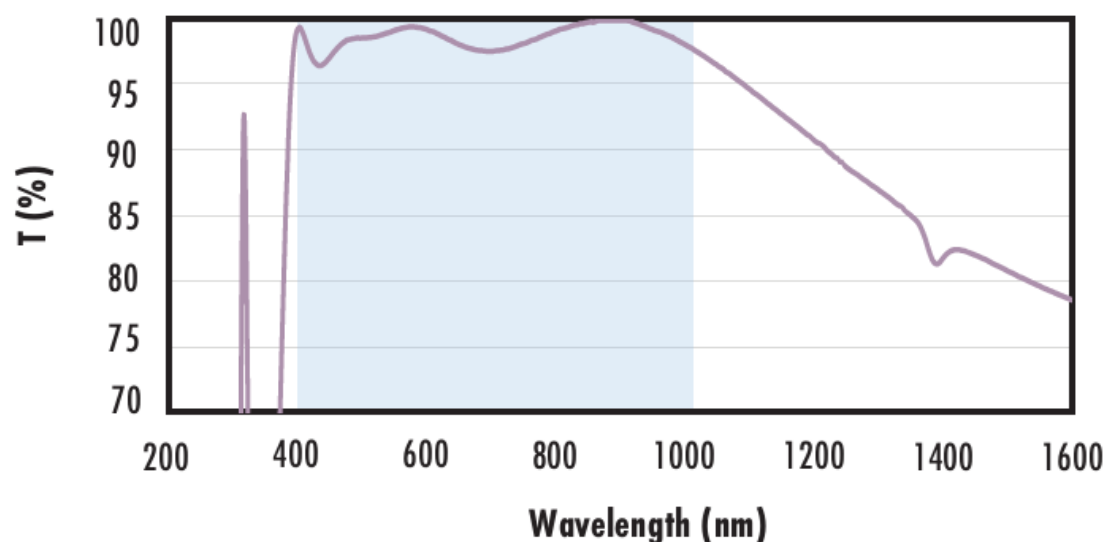
The blue shaded region indicates the coating design wavelength range, with the following specification:

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

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

[Click Here to Download Data](#)

### Fused Silica with VIS-NIR Coating Typical Transmission



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

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

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

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

[Click Here to Download Data](#)

### Fused Silica with VIS 0° Coating Typical Transmission



Typical transmission of a 3mm thick fused silica 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 - 675nm

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

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**Fused Silica with YAG-BBAR Coating  
Typical Transmission**



Typical transmission of a 3mm thick fused silica window with YAG-BBAR (500-1100nm) coating at 0° AOI.

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

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

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

[Click Here to Download Data](#)

**Fused Silica with NIR I Coating  
Typical Transmission**



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

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

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

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

[Click Here to Download Data](#)

**Fused Silica with NIR II Coating  
Typical Transmission**



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

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

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

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

[Click Here to Download Data](#)

**Kompatible Halterungen**