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# TECHSPEC® 12.7mm Dia. x 2mm Thickness, Uncoated, ZnSe Window

Stock **#39-392** **15 In Stock**

- 1 + **S$326.20**

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## General

**Type:**
Protective Window

**Type of Window:**
Crystal

## Physical & Mechanical Properties

**Clear Aperture CA (mm):**
11.43

**Diameter (mm):**
12.70 +0.0/-0.1

**Thickness (mm):**
2.00 ±0.1

**Parallelism (arcmin):**
<3

**Dimensional Tolerance (mm):**
+0.0/-0.1

**Bevel:**
Protective as needed

**Clear Aperture (%):**
90

**Edges:**
Fine Ground

**Poisson's Ratio:**
0.28

**Knoop Hardness (kg/mm$^2$):**
120.00

## Optical Properties

**Coating:**
Uncoated

**Substrate:**
Zinc Selenide (ZnSe)

**Index of Refraction ($n_d$):**
2.631

**Surface Quality:**
40-20

**Wavelength Range (nm):**
600 - 18000

**Surface Flatness (P-V):**
λ/10 @ 10.6µm

## Material Properties

**Density (g/cm$^3$):**
5.27

**Coefficient of Thermal Expansion CTE (10$^{-6}$/°C):**
7.57

## Regulatory Compliance

**RoHS 2015:**
Compliant

**Reach 224:**
Compliant

**Certificate of Conformance:**
View

## 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.

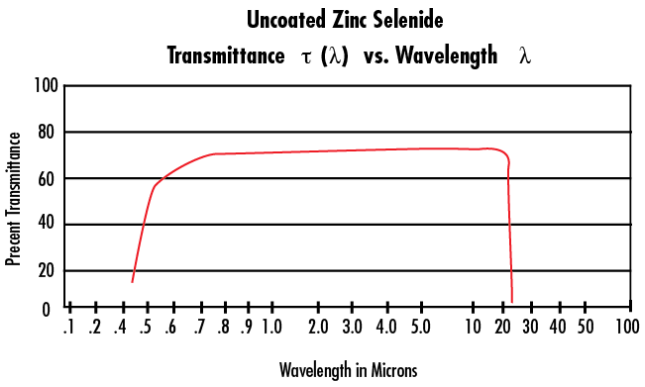
# Product Details

- Low Dispersion
- Available Uncoated or AR Coated
- Ideal for Thermal Imaging, FLIR, and Medical Systems

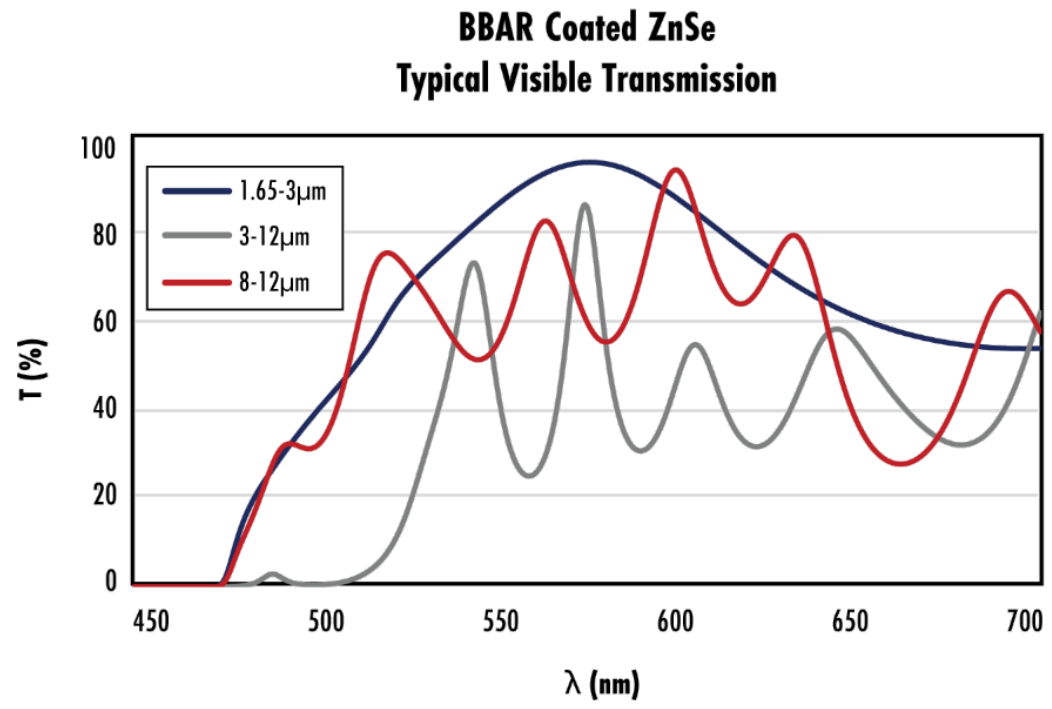
TECHSPEC® Zinc Selenide (ZnSe) Windows are ideal for a wide variety of infrared applications, including thermal imaging, FLIR, and medical systems. This chemically vapor-deposited material has wide usage in CO2 laser systems because of its low absorption coefficient and high resistance to thermal shock. Zinc Selenide (ZnSe) is a relatively soft material that scratches easily, and it is not recommended in harsh environments because its Knoop Hardness is only 120. When handling TECHSPEC Zinc Selenide (ZnSe) Windows, apply uniform pressure and wear Latex finger cots or gloves to prevent contamination. These windows are available uncoated or with broadband anti-reflection coating in diameters ranging from 5 to 127mm.

**Note:** Special care should be taken when handling Zinc Selenide as it is a toxic material. Always wear rubber or plastic gloves to avoid risk of contamination.

# Technical Information



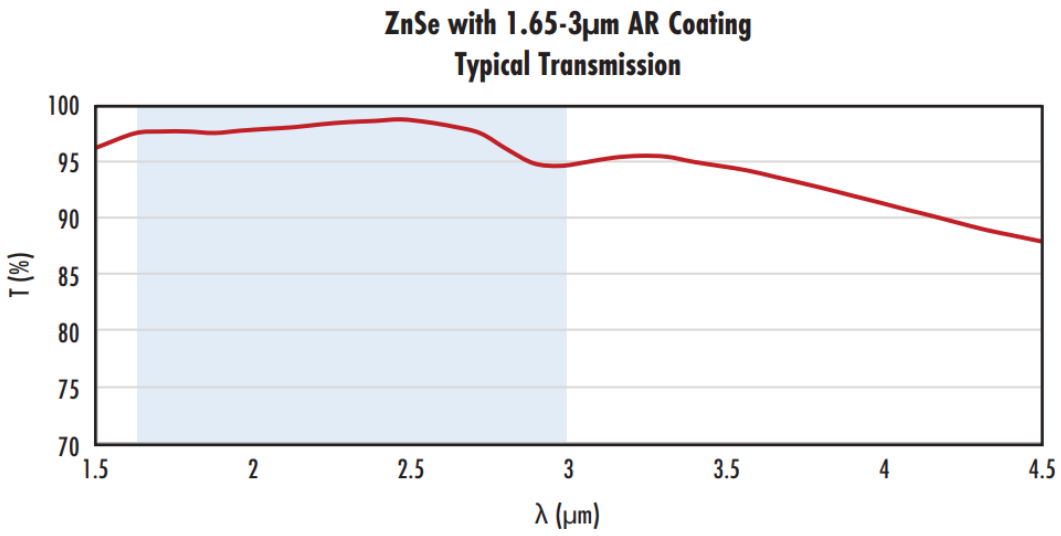

## AR COATED ZINC SELENIDE




Typical visible transmission of a 3mm thick ZnSe window coated with BBAR (1650-3000nm), BBAR (3000-12000nm), and BBAR (8000-12000nm coating).

This data is outside the design wavelength range of the BBAR coatings and thus is not guarenteed, but provides a reference for visible guide laser useage.

Click Here to Download Data




Typical transmission of a 3mm thick ZnSe window with BBAR (1650-3000nm) coating at 0° AOI.

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

$R_{avg}$ <1% @ 1650 - 3000nm
$R_{abs}$ <2% @ 1650 - 3000nm

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

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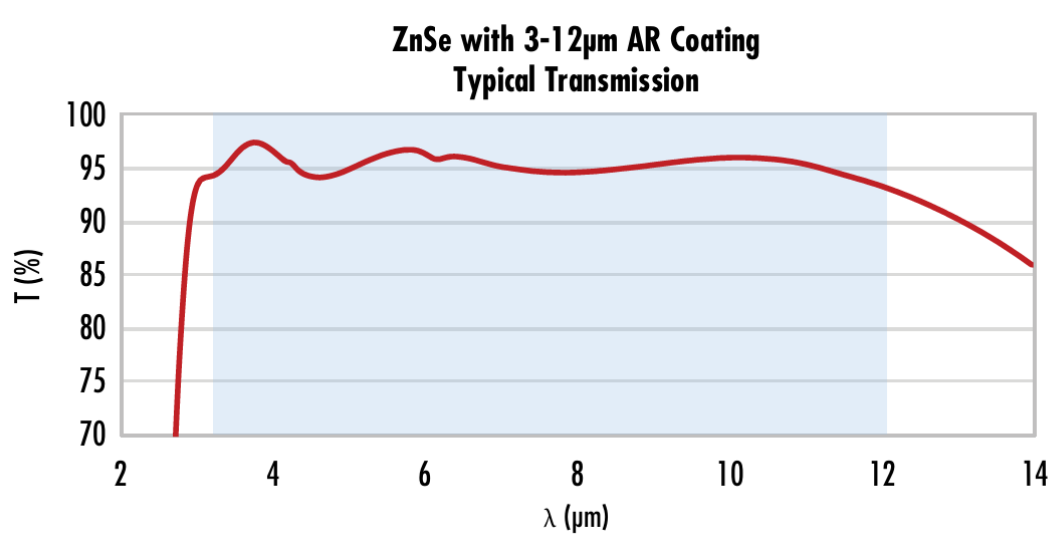


Typical transmission of a 3mm thick ZnSe window with BBAR (3000-12000nm) coating at 0° AOI.

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

$R_{avg}$ <5.0% @ 3 - 12µm

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

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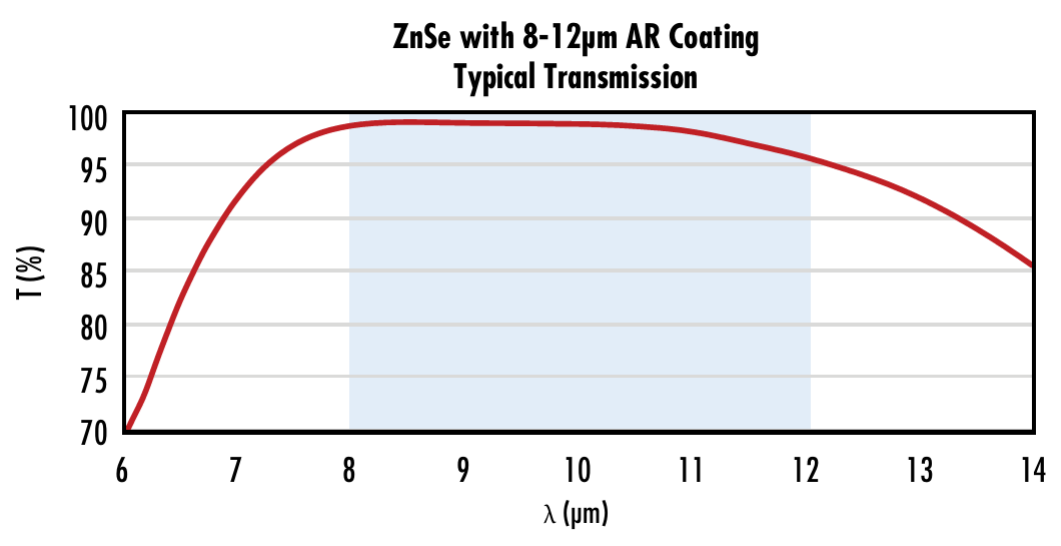


Typical transmission of a 3mm thick ZnSe window with BBAR (8000-12000nm) coating at 0° AOI.

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

$R_{avg}$ ≤0.5% @ 8 - 12µm

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

Click Here to Download Data

## Special Handling

These optics require special handling to avoid damage and ensure long-term performance. Proper handling, cleaning, and storage are essential to maintain optical quality. Explore our **Optics Cleaning Resources** for step-by-step guides and best practices. For personalized assistance, **Email us** or **Chat** with our technical support team.

**Component Handling Tools**

## Compatible Mounts

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