TECHSPEC®

50.8mm Dia. x 100mm FL, 8-12µm BBAR Coated, ZnSe Plano-Convex Lens

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TECHSPEC Zinc Selenide (ZnSe) Plano-Convex (PCX) Lenses

Stock #11-410 1 In Stock Other Coating Options

- 1 +

C$2,044.00

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Volume Pricing	
Qty 1-10	C$2,044.00 each
Qty 11-25	C$1,841.00 each
Qty 26-49	C$1,232.00 each
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Product Downloads

STEP:step | Curve:pdf | PDF Drawing:pdf | IGES:igs | Zemax:zar | eDrawing:eprt | Code V:seq | EO Spec Sheet

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General

Type:	Plano-Convex Lens

Physical & Mechanical Properties

Diameter (mm):	50.80 +0.00/-0.10	**Centering, ETD (µm):**	≤12.7
Center Thickness CT (mm):	4.60 ±0.10	**Edge Thickness ET (mm):**	2.28
Clear Aperture CA (mm):	45.72	**Bevel:**	Protective as needed
Surface Roughness (Å):	<50 RMS		

Optical Properties

Effective Focal Length EFL (mm):	100.00 @ 10.6µm	**Back Focal Length BFL (mm):**	98.09
Coating:	BBAR (8000-12000nm)	**Coating Specification:**	R_{avg} ≤0.5% @ 8 - 12µm
Substrate: ⓘ	Coherent® Infrared ZnSe	**Surface Quality:**	40-20
Power (P-V) @ 632.8nm:	λ	**Irregularity (P-V) @ 10.6µm:**	λ/20
Radius R_1 (mm):	140.27	**f/#:**	1.97

Numerical Aperture NA:	0.25	**Wavelength Range (nm):**	8000 - 12000
Bulk Absorption Coefficient (cm^1):	<0.0005 @ 10.6µm		

Electrical

Power (P-V) @ 10.6µm:	λ/10		

Regulatory Compliance

RoHS 2015:	**Compliant**	**Certificate of Conformance:**	**View**
Reach 242:	**Compliant**		

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

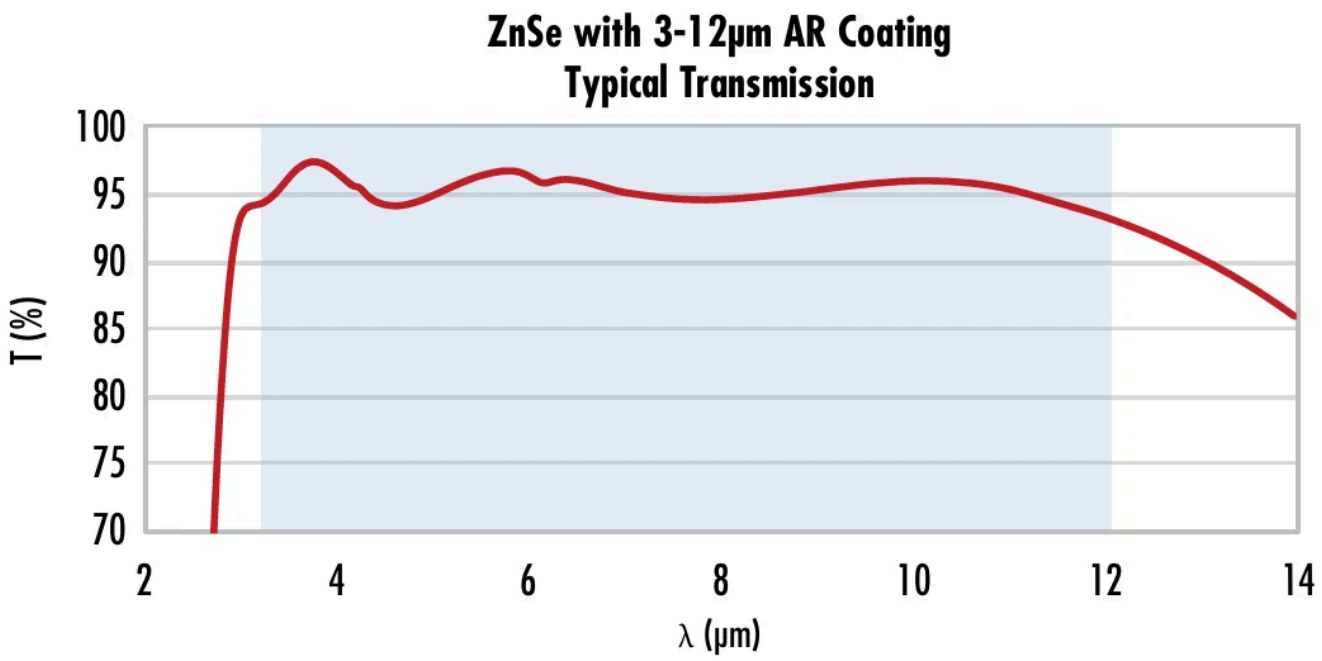
- Edmund Optics® Designed, Coherent® Manufactured
- Premier Grade ZnSe Material
- Uncoated or Broadband AR Coating Options

TECHSPEC® Zinc Selenide (ZnSe) Plano-Convex (PCX) Lenses are designed for focusing or collimation applications in the mid-wave and longwave infrared spectrum. Manufactured by Coherent®, these lenses feature Infrared ZnSe material with <0.0005cm^{-1} bulk absorption at 10.6µm and are available uncoated or with a variety of broadband anti-reflection coating options. The 8-12µm coating is ideal for use with CO_2 lasers and thermal camera applications, whereas the dual band 3-12µm coating is ideal for hyperspectral applications. TECHSPEC® Zinc Selenide PCX Lenses feature an irregularity of <λ/20 at 10.6µm, 40-20 surface quality, and <50Å surface roughness. Three diameter options are available, with effective focal lengths ranging from 12.7mm to 250mm.

Notes: II-VI Incorporated is now Coherent Corp.

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



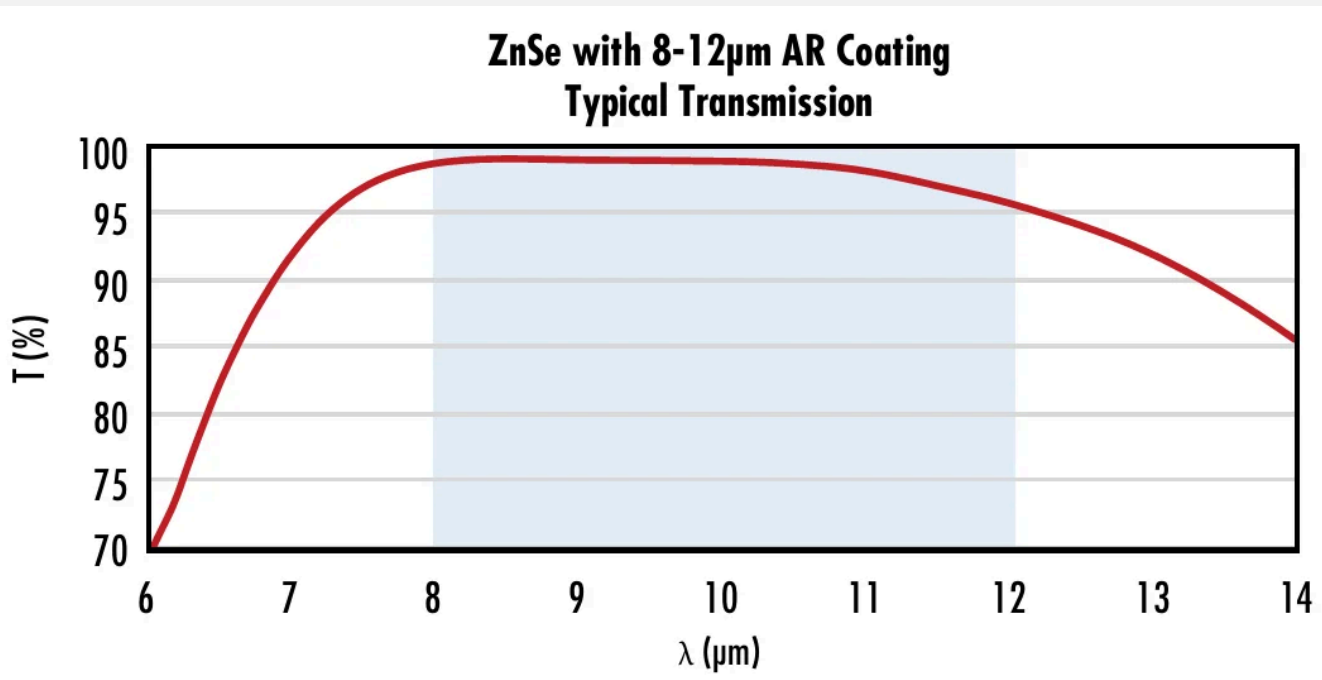
Typical transmission of a ZnSe window with BBAR (30 12000nm) coating at 0° AOI.

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

R_{avg} <5.0% @ 3 - 12µm

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

Click Here to Download Data



Typical transmission of a ZnSe window with BBAR (80 12000nm) coating at 0° AOI.

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

R_{avg} ≤0.5% @ 8 - 12µm

Data outside this range is not guaranteed and is fo 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

Related Products

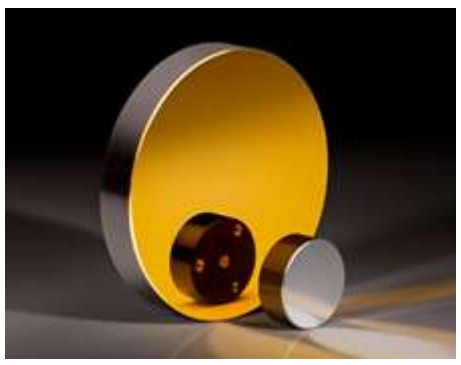
Germanium (Ge) Plano-Convex (PCX) Lenses

Zinc Selenide (ZnSe) Aspheric Lenses

Infrared Optics

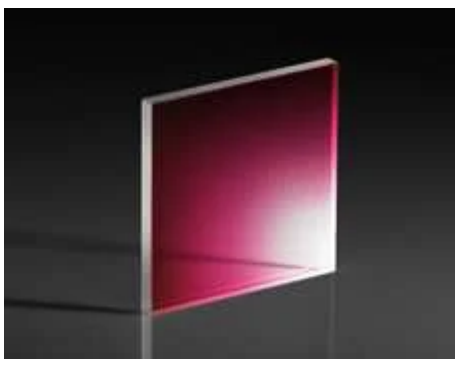
Zinc Selenide (ZnSe) Optics

Frequently Purchased Together



#47-118 – 50.8mm Dia., Gold Coated, Aluminum Substrate Mirror
C$660.80
Qty

#47-688 – 50mm Dia. x 3mm Thick, 8-12µm AR Coated, Ge Window
C$2,737.00
Qty



#49-633 – 25mm Sq., 4mm Thick, VIS-NIR Coated λ/4 N-BK7 Window
C$159.60
Qty

#56-572 – Micro Manual Rotary Stage
C$721.00
Qty

Compatible Mounts

	Title	Type	Compare	Stock Number	Price ☐	Buy
MORE+ 	50.0/50.8mm Optic Dia., SM2 Thin Mount	Fixed		#17-716	C$50.75 Request Quote	20+ In Stock 1
MORE+ 	50.8mm Optic Dia., Optic Mount	Fixed		#64-569	C$68.95 Request Quote	12 In Stock 1
MORE+ 	50.0/50.8mm Optic Dia., X-Y Translating Optic Mount	Adjustable - Linear (XY)		#62-957	C$431.20 Request Quote	1 In Stock 1
MORE+ 	50.0/50.8mm Optic Dia., X-Y-Z Translating Optic Mount	Adjustable - Linear (XYZ)		#62-960	C$847.00 Request Quote	20+ In Stock 1
MORE+ 	50.0/50.8mm Optic Dia., 5 Axes Optical Mount	Adjustable - Linear (XYZ) & Tip-Tilt		#13-778	C$1,176.00 Request Quote	10 In Stock 1

Check out our full selection of mounts **here**.

Resources

Media Type

APPLICATION NOTE

APPLICATION NOTE

APPLICATION NOTE

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Anti-Reflection (AR) Coatings

An Introduction to Optical Coatings

Understanding Optical Specifications

APPLICATION NOTE

Lens Geometry Performance Comparison

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Advantages of Using Meniscus Lenses in...

SCIENTIFIC PAPER

Advantages of using engineered chalcogenide...

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