

TECHSPEC[®] 50.8mm Dia. x 50.8mm FL, 3-12μm BBAR Coated, ZnSe Plano-Convex Lens

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

Stock **#11-430** **5 In Stock**

[Other Coating Options](#)

-

1

+

S\$2,450^{.00}

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Volume Pricing	
Qty 1-10	S\$2,450.00 each
Qty 11-25	S\$2,205.00 each
Qty 26-49	S\$1,736.00 each
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General

Type:

Plano-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

50.80 +0.00/-0.10

≤12.7	Centering, ETD (μm):
7.10 ±0.10	Center Thickness CT (mm):
2.42	Edge Thickness ET (mm):
45.72	Clear Aperture CA (mm):
Protective as needed	Bevel:
<50 RMS	Surface Roughness (□):

Optical Properties	
50.80 @ 10.6μm	Effective Focal Length EFL (mm):
47.85	Back Focal Length BFL (mm):
BBAR (3000-12000nm)	Coating:
Ravg ≤3.0% @ 3 - 12μm	Coating Specification:
Coherent® Infrared ZnSe	Substrate: □
40-20	Surface Quality:
λ	Power (P-V) @ 632.8nm:
λ/20	Irregularity (P-V) @ 10.6μm:
71.26	Radius R ₁ (mm):
1.00	f/#:
0.50	Numerical Aperture NA:
3000 - 12000	Wavelength Range (nm):
<0.0005 @ 10.6μm	Bulk Absorption Coefficient (cm ⁻¹):

Electrical	
λ/10	Power (P-V) @ 10.6μm:

Regulatory Compliance	
Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 242:

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 CO₂ 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



AR COATED ZINC SELENIDE																													
ZnSe with 3-12μm AR Coating Typical Transmission <table><tr><th>λ (μm)</th><th>T (%)</th></tr><tr><td>2.5</td><td>70</td></tr><tr><td>3.0</td><td>95</td></tr><tr><td>4.0</td><td>97</td></tr><tr><td>5.0</td><td>94</td></tr><tr><td>6.0</td><td>96</td></tr><tr><td>7.0</td><td>95</td></tr><tr><td>8.0</td><td>94</td></tr><tr><td>9.0</td><td>95</td></tr><tr><td>10.0</td><td>96</td></tr><tr><td>11.0</td><td>95</td></tr><tr><td>12.0</td><td>94</td></tr><tr><td>13.0</td><td>92</td></tr><tr><td>14.0</td><td>85</td></tr></table>	λ (μm)	T (%)	2.5	70	3.0	95	4.0	97	5.0	94	6.0	96	7.0	95	8.0	94	9.0	95	10.0	96	11.0	95	12.0	94	13.0	92	14.0	85	Typical transmission of a ZnSe window with BBAR (3000-12000nm) coating at 0° AOI. The blue shaded region indicates the coating design wavelength range, with the following specification: $R_{avg} < 5.0\%$ @ 3 - 12μm Data outside this range is not guaranteed and is for reference only. Click Here to Download Data
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ZnSe with 8-12μm AR Coating Typical Transmission <table><tr><th>λ (μm)</th><th>T (%)</th></tr><tr><td>6.0</td><td>70</td></tr><tr><td>7.0</td><td>90</td></tr><tr><td>8.0</td><td>98</td></tr><tr><td>9.0</td><td>98</td></tr><tr><td>10.0</td><td>98</td></tr><tr><td>11.0</td><td>97</td></tr><tr><td>12.0</td><td>95</td></tr><tr><td>13.0</td><td>90</td></tr><tr><td>14.0</td><td>85</td></tr></table>	λ (μm)	T (%)	6.0	70	7.0	90	8.0	98	9.0	98	10.0	98	11.0	97	12.0	95	13.0	90	14.0	85	Typical transmission of a ZnSe window with BBAR (8000-12000nm) coating at 0° AOI. The blue shaded region indicates the coating design wavelength range, with the following specification: $R_{avg} \leq 0.5\%$ @ 8 - 12μm Data outside this range is not guaranteed and is for reference only. Click Here to Download Data								
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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.



Custom

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](#).

Compatible Mounts
