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TECHSPEC<sup>®</sup> 25.4mm Dia. x 250mm FL, 8-12μm BBAR Coated, ZnSe Plano-Convex Lens

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

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-

1

+

€555<sup>.00</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-10       | €555,00 each                  |
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General

Type:

Plano-Convex Lens

Physical & Mechanical Properties

Diameter (mm):

25.40 +0.00/-0.10

|                      |                           |
|----------------------|---------------------------|
| ≤12.7                | Centering, ETD (μm):      |
| 2.40 ±0.10           | Center Thickness CT (mm): |
| 2.17                 | Edge Thickness ET (mm):   |
| 22.86                | Clear Aperture CA (mm):   |
| Protective as needed | Bevel:                    |
| <50 RMS              | Surface Roughness (□):    |

|                         |                                                  |
|-------------------------|--------------------------------------------------|
| Optical Properties      |                                                  |
| 250.00 @ 10.6μm         | Effective Focal Length EFL (mm):                 |
| 249                     | Back Focal Length BFL (mm):                      |
| BBAR (8000-12000nm)     | Coating:                                         |
| Ravg ≤0.5% @ 8 - 12μm   | Coating Specification:                           |
| Coherent® Infrared ZnSe | Substrate: □                                     |
| 40-20                   | Surface Quality:                                 |
| λ                       | Power (P-V) @ 632.8nm:                           |
| λ/20                    | Irregularity (P-V) @ 10.6μm:                     |
| 350.67                  | Radius R <sub>1</sub> (mm):                      |
| 9.84                    | f/#:                                             |
| 0.05                    | Numerical Aperture NA:                           |
| 8000 - 12000            | Wavelength Range (nm):                           |
| <0.0005 @ 10.6μm        | Bulk Absorption Coefficient (cm <sup>-1</sup> ): |

|            |                       |
|------------|-----------------------|
| 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<sup>-1</sup> 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<sub>2</sub> 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|-----|----|-----|----|-----|----|-----|----|------|----|------|----|------|----|------|----|------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|----|------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><p><b>ZnSe with 3-12μm AR Coating<br/>Typical Transmission</b></p><table border="1"><caption>Approximate data for ZnSe with 3-12μm AR Coating</caption><thead><tr><th>λ (μm)</th><th>T (%)</th></tr></thead><tbody><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>93</td></tr><tr><td>14.0</td><td>85</td></tr></tbody></table></div> | 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 | 93 | 14.0 | 85 | <p>Typical transmission of a ZnSe window with BBAR (3000-12000nm) coating at 0° AOI.</p> <p>The blue shaded region indicates the coating design wavelength range, with the following specification:</p> <p><math>R_{avg} &lt; 5.0\%</math> @ 3 - 12μm</p> <p>Data outside this range is not guaranteed and is for reference only.</p> <p><a href="#">Click Here to Download Data</a></p> |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 93     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 14.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 85     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
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| λ (μm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | T (%)  |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 6.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 70     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 7.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 92     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 8.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 98     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 9.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 98     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 10.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 98     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 11.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 97     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 12.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 95     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
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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:

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- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

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## Compatible Mounts

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