

TECHSPEC<sup>®</sup> 25.4mm Dia. x 100mm FL, 3-12μm BBAR Coated, ZnSe Plano-Convex Lens

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

Stock **#11-427** **5 In Stock**

[Other Coating Options](#)

-

1

+

S\$777<sup>00</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-10       | S\$777.00 each                |
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Product Downloads

General

Plano-Convex Lens

Type:

Physical & Mechanical Properties

25.40 +0.00/-0.10

Diameter (mm):

|                      |                           |
|----------------------|---------------------------|
| ≤12.7                | Centering, ETD (μm):      |
| 2.50 ±0.10           | Center Thickness CT (mm): |
| 1.92                 | Edge Thickness ET (mm):   |
| 22.86                | Clear Aperture CA (mm):   |
| Protective as needed | Bevel:                    |

|         |                        |
|---------|------------------------|
| <50 RMS | Surface Roughness (□): |
|---------|------------------------|

Optical Properties

|                 |                                  |
|-----------------|----------------------------------|
| 100.00 @ 10.6μm | Effective Focal Length EFL (mm): |
| 98.96           | Back Focal Length BFL (mm):      |

|                                   |                        |
|-----------------------------------|------------------------|
| BBAR (3000-12000nm)               | Coating:               |
| R <sub>avg</sub> ≤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: |

|        |                             |
|--------|-----------------------------|
| 140.27 | Radius R <sub>1</sub> (mm): |
| 3.94   | f/#:                        |

|              |                        |
|--------------|------------------------|
| 0.13         | Numerical Aperture NA: |
| 3000 - 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: |
|-----------|------------|

## 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

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## 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 90     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 8.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 99     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 9.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 99     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 10.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 99     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 11.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 98     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 12.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 96     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 13.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 92     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |
| 14.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 85     |       |     |    |     |    |     |    |     |    |      |    |      |    |      |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |    |      |    |      |    |                                                                                                                                                                                                                                                                                                                                                                                          |

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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