

50.8mm Dia., 5mm Thick, 8-12µm BBAR Coated, ISP Optics Zinc Selenide (ZnSe) Window | AR812-ZC-W-50-5

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Stock **#24-682** **CLEARANCE** **1 In Stock**

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1

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\$424.82

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SPECIFICATIONS

General

Type:  
Protective Window

|                                                                      |                                                              |
|----------------------------------------------------------------------|--------------------------------------------------------------|
| AR812-ZC-W-50-5                                                      | Model Number:                                                |
| Physical & Mechanical Properties                                     |                                                              |
| Protective as needed                                                 | Bevel:                                                       |
| 85                                                                   | Clear Aperture (%):                                          |
| 43.18                                                                | Clear Aperture CA (mm):                                      |
| 50.80 +0.00/-0.13                                                    | Diameter (mm):                                               |
| 5.00 ±0.13                                                           | Thickness (mm):                                              |
| Fine Ground                                                          | Edges:                                                       |
| 120.00                                                               | Knoop Hardness (kg/mm²):                                     |
| <3                                                                   | Parallelism (arcmin):                                        |
| 0.28                                                                 | Poisson's Ratio:                                             |
| 67.2                                                                 | Young's Modulus (GPa):                                       |
| Optical Properties                                                   |                                                              |
| BBAR (8000-12000nm)                                                  | Coating:                                                     |
| R <sub>avg</sub> <3.0% @ 2 - 13µm<br>R <sub>abs</sub> <6% @ 2 - 13µm | Coating Specification:                                       |
| 2.631                                                                | Index of Refraction (n <sub>d</sub> ):                       |
| Zinc Selenide (ZnSe)                                                 | Substrate:                                                   |
| λ/20 @ 10.6µm                                                        | Surface Flatness (P-V):                                      |
| 60-40                                                                | Surface Quality:                                             |
| 8000 - 12000                                                         | Wavelength Range (nm):                                       |
| Material Properties                                                  |                                                              |
| 7.57                                                                 | Coefficient of Thermal Expansion CTE (10 <sup>-6</sup> /°C): |
| 5.27                                                                 | Density (g/cm³):                                             |
| Regulatory Compliance                                                |                                                              |
| Compliant                                                            | RoHS 2015:                                                   |
| View                                                                 | Certificate of Conformance:                                  |
| Compliant                                                            | Reach 240:                                                   |

## PRODUCT DETAILS

- Low Dispersion and Absorption from 0.6 – 18µm
- High Resistance to Thermal Shock
- Ideal for Thermal Imaging, FLIR, and Medical Systems

ISP Optics Zinc Selenide (ZnSe) Windows feature low absorption and low dispersion across a wide wavelength range from the visible to the infrared spectrum. This makes Zinc Selenide ideal for a wide array of infrared applications including thermal imaging, FLIR, and medical systems. Zinc Selenide (ZnSe) is a relatively soft material that scratches easily and it is not recommended in harsh environments because its Knoop Hardness is only 120. ISP Optics Zinc Selenide (ZnSe) Windows are particularly useful for 10.6µm CO2 laser applications, due to its low absorption. These windows are available uncoated or with Broadband Anti-Reflection (BBAR) coating options for 2 - 13µm or 8 - 12µm for increased transmission.

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

## 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

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