

# 38.1mm Dia., 2mm Thick, Uncoated, ISP Optics Sapphire Window | AL-W-38-2

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1

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**€105<sup>48</sup>** ~~€210,95~~

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## SPECIFICATIONS

### General

Protective Window

Type:

AL-W-38-2

Model Number:

| Physical & Mechanical Properties                   |                                                              |
|----------------------------------------------------|--------------------------------------------------------------|
| Protective as needed                               | Bevel:                                                       |
| 85                                                 | Clear Aperture (%):                                          |
| 32.38                                              | Clear Aperture CA (mm):                                      |
| 38.10 +0.00/-0.13                                  | Diameter (mm):                                               |
| 2.00 ±0.13                                         | Thickness (mm):                                              |
| Fine Ground                                        | Edges:                                                       |
| 1,900.00                                           | Knoop Hardness (kg/mm²):                                     |
| <3                                                 | Parallelism (arcmin):                                        |
| 0.27                                               | Poisson's Ratio:                                             |
| 435                                                | Young's Modulus (GPa):                                       |
| Optical Properties                                 |                                                              |
| 72.24                                              | Abbe Number (v <sub>d</sub> ):                               |
| Random                                             | Axis Orientation:                                            |
| 0.008 for Visible Light Orthogonal to Optical Axis | Birefringence (n <sub>o</sub> -n <sub>e</sub> ):             |
| Uncoated                                           | Coating:                                                     |
| 1.77                                               | Index of Refraction (n <sub>d</sub> ):                       |
| Sapphire (Al <sub>2</sub> O <sub>3</sub> )         | Substrate:                                                   |
| 2λ per 25.4mm                                      | Surface Flatness (P-V):                                      |
| 60-40                                              | Surface Quality:                                             |
| 330 - 5500                                         | Wavelength Range (nm):                                       |
| Material Properties                                |                                                              |
| 8.8                                                | Coefficient of Thermal Expansion CTE (10 <sup>-6</sup> /°C): |
| 3.97                                               | Density (g/cm³):                                             |
| Regulatory Compliance                              |                                                              |
| Compliant                                          | RoHS 2015:                                                   |
| View                                               | Certificate of Conformance:                                  |
| Compliant                                          | Reach 240:                                                   |

## PRODUCT DETAILS

- High Corrosion Resistance and Thermal Stability
- Higher Durability than Glass Windows
- Transmission from 0.33 – 5.5µm

ISP Optics Sapphire Windows are highly durable and transmissive protective windows that are ideal for harsh environments. Sapphire is chemically inert, insoluble in water, and resistant to common acids and alkalis. Chemically, sapphire is single crystal aluminum oxide (Al<sub>2</sub>O<sub>3</sub>) and is useful in a transmission range from 0.33 – 5.5µm when uncoated. ISP Optics Sapphire Windows feature a Knoop Hardness of 1900 and are resistant to scratches, digs, and fractures that might otherwise weaken fused silica substrates. These windows are often used in applications with high temperatures and pressure such as viewports for vacuum or plasma chambers.