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12.7mm Dia., 2mm Thick, Uncoated, ISP Optics Silicon (Si) Window | SI-W-12-2

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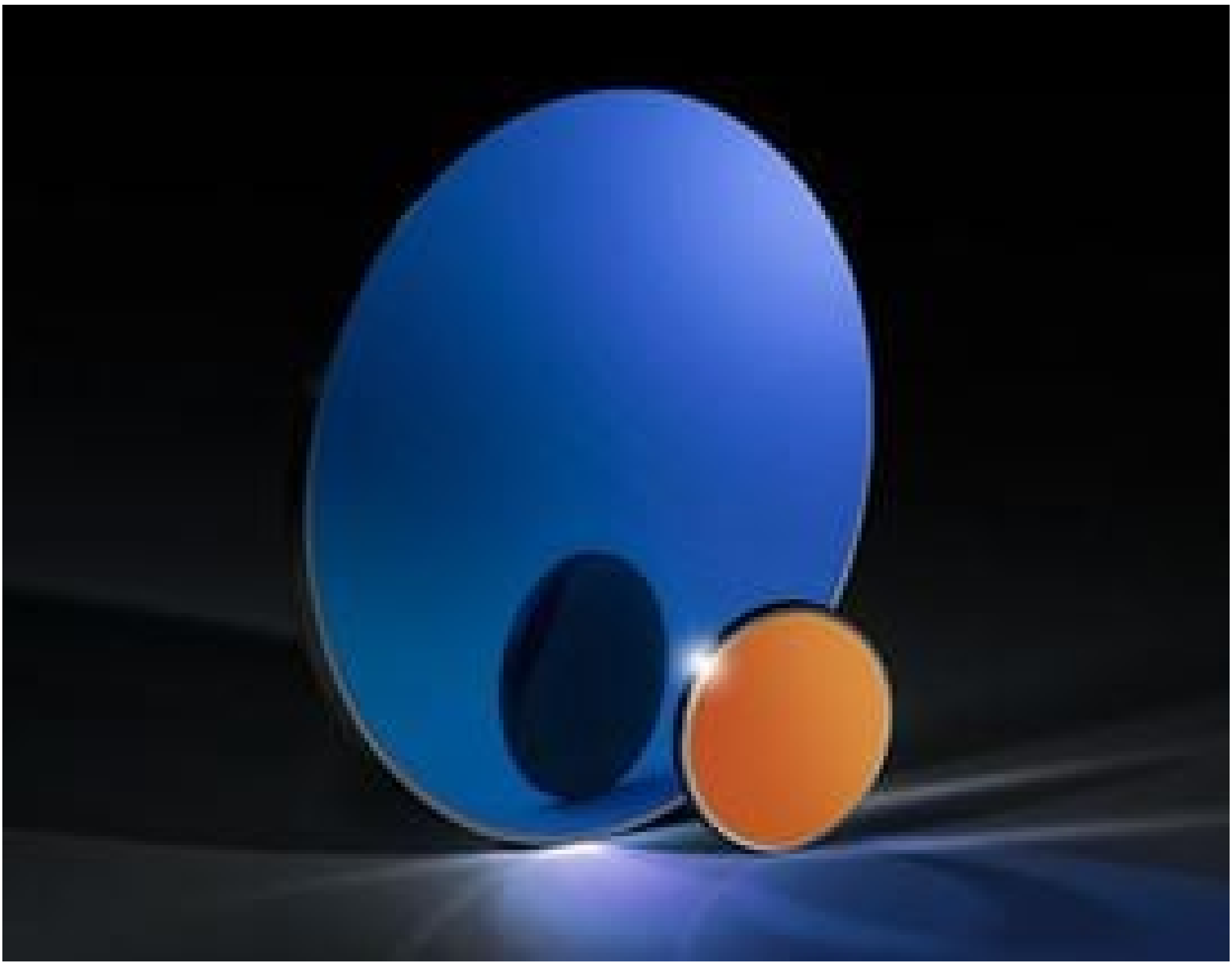

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Product Downloads

General

Model Number:
SI-W-12-2

Type:
Protective Window

Physical & Mechanical Properties

Clear Aperture CA (mm):
10.79

Diameter (mm):

12.70 +0.00/-0.13

Thickness (mm):

2.00 ±0.13

Parallelism (arcmin):

<3

Bevel:

Protective as needed

Clear Aperture (%):

85

Edges:

Fine Ground

Poisson's Ratio:

0.27

Young's Modulus (GPa):

140

Knoop Hardness (kg/mm^2):

1,150.00

Optical Properties

Coating:

Uncoated

Substrate:

Silicon (Si)

Index of Refraction (n_d):

3.422 @ 5µm

Surface Quality:

40-20

Wavelength Range (nm):

1200 - 7000

Surface Flatness (P-V):

2λ

Material Properties

Density (g/cm^3):

2.33

Coefficient of Thermal Expansion CTE (10^{-6}/°C):

2.55

Regulatory Compliance

RoHS 2015:

Compliant

Certificate of Conformance:

View

Reach 240:

Compliant

Product Details

- Transmission from 1.2 - 7µm
- Available Uncoated or HDAR Coated for 3 - 5µm
- Ideal for Weight Sensitive Applications

ISP Optics Silicon (Si) Windows provide transmission in the Near-Infrared (NIR) and Mid-Wave Infrared (MWIR) from 1.2 - 7µm. Silicon features a Knoop Hardness of 1150, making it harder and less brittle than Germanium. A High-Durability Anti-Reflection (HDAR) coating option increases the durability of the substrate while significantly improving transmission from 3 - 5µm, enabling use in harsh environments. ISP Optics Silicon (Si) Windows are ideal for weight-sensitive IR applications due to its low density of 2.329 g/cm^3, which is half as dense as Germanium and Zinc Selenide. These windows are ideal for NIR imaging applications and are important for detection of sources radiating at a black body temperature of 700K.