

[See all 2 Products in Family](#)

38.1mm Dia., 3mm Thick, 8-12µm AR Coated & DLC Coated, ISP Optics Germanium (Ge) Window | DLC812-GE-W-38-3

See More by [ISP Optics](#)



Stock #24-578 **20+ In Stock**

€945⁰⁰

ADD TO CART

Volume Pricing	
Qty 1+	€945,00 each
Need More?	Request Quote

! Prices shown are exclusive of VAT/local taxes

Product Downloads

General

DLC812-GE-W-38-3 **Model Number:**

Protective Window **Type:**

Physical & Mechanical Properties

Clear Aperture CA (mm):

32.38

38.10 +0.00/-0.13

Diameter (mm):

Thickness (mm):

3.00 ±0.13

Parallelism (arcmin):

<3

Bevel:

Protective as needed

Clear Aperture (%):

85

Edges:

Fine Ground

Poisson's Ratio:

0.28

Young's Modulus (GPa):

102.7

Knoop Hardness (kg/mm²):

780.00

Optical Properties

Coating:

S1: DLC Coating
S2: BBAR (8000-12000nm)

Substrate:

[Germanium \(Ge\)](#)

Index of Refraction (n_d):

4.002 @ 11µm

Surface Quality:

40-20

Coating Specification:

T_{avg} ≥90.0% @ 8 - 12µm
T_{min} ≥80.0% @ 8 - 12µm

Wavelength Range (nm):

2000 - 14000

Surface Flatness (P-V):

λ/10 @ 10.6µm

Coating Temperature (°F):

AR: -80 to +160 per MIL-C-48497C
DLC: -80 to +160 per MIL-C-48497C

Material Properties

Density (g/cm³):

5.33

Coefficient of Thermal Expansion CTE (10⁻⁶/°C):

6.1

Environmental & Durability Factors

Coating Abrasion:

AR: Moderate, per MIL-C-48497C
DLC: Severe, per MIL-C-48497C

Coating Adhesion:

AR: per MIL-C-48497C
DLC: per MIL-C-48497C

Coating Humidity:

AR: 24 Hours per MIL-C-48497C
DLC: 24 Hours per MIL-C-48497C

Coating Salt Spray:

AR: N/A
DLC: ≥72 Hours per MIL-C-675

Coating Salt Solubility:

AR: N/A
DLC: ≥24 Hours Immersion per MIL-C-675C

Coating Solubility and Cleaning:

AR: per MIL-C-48497C
DLC: per MIL-C-48497C

Coating Wiper Durability:

AR: N/A
DLC: ≥1,000 Wipes of Sand/Slurry per TS-1888

Regulatory Compliance

RoHS 2015:

[Compliant](#)

Certificate of Conformance:

[View](#)

Reach 240:

[Compliant](#)

Product Details

- Minimal Chromatic Aberration Due to Low Dispersion
- Uncoated Transmission from 2 – 16µm
- Available with BBAR or DLC Coating for 8 – 12µm
- Due to material supply chain disruptions with germanium, there may be increased lead times and price changes on our germanium products. For more information, please contact our [customer service team](#).
- Edmund Optics has limited remaining inventory of this part number and no raw material available to supply more once this is depleted. Please contact our Product Support Engineers to help with an alternate solution for your needs. Customer Service can provide you the latest price and availability.

ISP Optics Germanium (Ge) Windows provide transmission and low absorption through the Long-Wave Infrared (LWIR) spectrum, making it useful for thermal imaging applications. Germanium features a Knoop Hardness of 780, making it ideal for infrared applications requiring rugged optics. These windows are available uncoated, Broadband Anti-Reflection (BBAR) coated for 8 – 12µm, or Diamond-Like Carbon (DLC) coated for 8 – 12µm. ISP Optics Germanium Windows are ideal for integration into thermal imaging systems, especially those that require rugged optics. Germanium is subject to thermal runaway, meaning that the transmission decreases as temperature increases. As such, these germanium windows should be used at temperatures below 100°C.

Special Handling

Germanium Optics Handling and Cleaning Guidelines

Germanium optics require special handling and cleaning procedures. Always wear gloves during handling to prevent contamination, and wash hands afterward. Avoid contact between Germanium dust and the eyes, skin, or clothing. When not in use, store optics sealed and covered at temperatures between 20°C and 25°C. Do not expose them to temperatures exceeding 100°C when in use.

Handling Guidelines

- Always wear [gloves](#) to prevent damage from skin oils.
- If Germanium dust is present, take the following precautions:
 - Wear safety glasses to protect eyes.
 - Use a dust mask or face mask to avoid inhalation.
 - Wear [gloves](#) to prevent skin contact.
- Maintain storage temperature between 20°C and 25°C with humidity below 30%.
- Wrap Germanium optics in a [lens cloth](#) or [pouch](#) and seal in a [container](#) when not in use.
- Germanium is brittle and heavy—always place it on soft surfaces and avoid dropping it.

Approved Cleaning Solvents

- Ethanol
- Isopropyl Alcohol
- Methanol
- Reagent-Grade Acetone
- Liquid CO₂
- [Shop Now](#)