

50.8mm Dia., 6mm Thick, 30' Wedge, ISP Optics Germanium (Ge) Wedged Window | GE-WW-50-6

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Germanium (Ge) Wedged Windows

Stock **#16-811** **2 In Stock**

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1

+

€525⁰⁰ €1.050,00

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Volume Pricing	
Qty 1-10	€1.050,00 €525,00 each
Qty 11+	€945,00 €472,50 each
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Product Downloads

SPECIFICATIONS

General

Type:

Protective Window	
	Model Number:
GE-VW-50-6	
Physical & Mechanical Properties	
	Bevel:
Protective as needed	
	Clear Aperture (%):
85	
	Clear Aperture CA (mm):
43.18	
	Diameter (mm):
50.80 +0.00/-0.13	
	Thickness (mm):
6.00 ±0.13	
	Edges:
Fine Ground	
	Knoop Hardness (kg/mm²):
780.00	
	Poisson's Ratio:
0.28	
	Young's Modulus (GPa):
102.7	
	Wedge Angle (arcmin):
30' ±15'	
Optical Properties	
	Coating:
Uncoated	
	Index of Refraction (n _d):
4.002 @ 11µm	
	Substrate:
Germanium (Ge)	
	Surface Flatness (P-V):
2λ @ 633nm	
	Surface Quality:
60-40	
	Wavelength Range (nm):
2000 - 14000	
Material Properties	
	Coefficient of Thermal Expansion CTE (10 ⁻⁶ /°C):
6.1	
	Density (g/cm³):
4.84	
Regulatory Compliance	
	RoHS 2015:
Compliant	
	Certificate of Conformance:
View	
	Reach 240:
Compliant	

PRODUCT DETAILS

- 30 Arcmin Wedge
 - High Transmission from 2 – 10µm
 - Ideal for Infrared Applications Requiring Rugged Optics
 - [Precision Flat Germanium Windows](#) Also Available
 - 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](#).
- ISP Optics Germanium (Ge) Wedged Windows provide laser output protection for beam sampling applications and are used to eliminate fringe patterns from etalon effects as well as prevent cavity feedback. Germanium is insoluble, making it inert to water, air, alkalis and acids except nitric acid. Because germanium is subject to thermal runaway, these windows should be used at temperatures below 100°C. Germanium's high density (5.33g/cm³) should be considered when designing for weight-sensitive systems, and its high index of refraction (~4.0 from 2 - 14µm) should be considered for applications looking to maximize throughput. ISP Optics Germanium (Ge) Wedged Windows offers a broad transmission range and a Knoop Hardness of 780 (approximately twice that of magnesium fluoride), making it suitable for infrared applications requiring rugged optics.

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 COI
- [Shop Now](#)

CUSTOM

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

Learn more about our [custom manufacturing capabilities](#) or submit an inquiry [here](#).
