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**TECHSPEC® 50mm Dia. x 3mm Thick, 8-12µm AR Coated & DLC Coated, Ge Window**



TECHSPEC® Diamond-Like Carbon (DLC) Coated Germanium Windows

Stock **#13-798** CLEARANCE CONTACT US

⊖ 1 ⊕ C\$2,324<sup>00</sup>

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**General**

Protective Window **Type:**

Arrow on substrate edge points towards DLC coated surface **Note:**

**Physical & Mechanical Properties**

45.00 **Clear Aperture CA (mm):**

50.00 +0.0/-0.1 **Diameter (mm):**

3.00 ±0.1	<b>Thickness (mm):</b>
<1	<b>Parallelism (arcmin):</b>
Protective as needed	<b>Bevel:</b>
90	<b>Clear Aperture (%):</b>
Fine Ground	<b>Edges:</b>
780.00	<b>Knoop Hardness (kg/mm<sup>2</sup>):</b>

## Optical Properties

S1: DLC Coating S2: BBAR (8000-12000nm)	<b>Coating:</b>
Germanium (Ge)	<b>Substrate:</b> <input type="checkbox"/>
60-40	<b>Surface Quality:</b>
AR: R <sub>avg</sub> ≤0.5% @ 8000 - 12000nm	<b>Coating Specification:</b>
8000 - 12000	<b>Wavelength Range (nm):</b>
AR: -80 to +160 per ML-C-48497A Paragraph 4.5.4.1 DLC: -80 to +160 per ML-M-13508C Paragraph 4.4.4	<b>Coating Temperature (°F):</b>

## Environmental & Durability Factors

AR: Moderate, per ML-C-48497A Paragraph 4.5.3.3 DLC: Severe, per ML-C-675C Paragraph 4.5.10	<b>Coating Abrasion:</b>
AR: per ML-C-48497A Paragraph 4.5.3.1 DLC: per ML-M-13508C Paragraph 4.4.6	<b>Coating Adhesion:</b>
AR: per ML-C-48497A Paragraph 4.5.3.2 DLC: ≥24 Hours per ML-C-675C paragraph 4.5.8	<b>Coating Humidity:</b>
AR: N/A ≥24 Hours per ML-C-675C paragraph 4.5.9	<b>Coating Salt Spray:</b>
AR: N/A DLC: ≥24 Hours Immersion per ML-C-675C paragraph 4.5.7	<b>Coating Salt Solubility:</b>
AR: per ML-C-48497A Paragraph 4.5.4.2 DLC: N/A	<b>Coating Solubility and Cleaning:</b>
AR: N/A DLC: ≥5,000 Wipes of Sand/Slurry per TS-1888	<b>Coating Wiper Durability:</b>

## Regulatory Compliance

<a href="#">Compliant</a>	<b>RoHS 2015:</b>
<a href="#">View</a>	<b>Certificate of Conformance:</b>
<a href="#">Compliant</a>	<b>Reach 235:</b>

### Need different specs or modifications?

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](#).

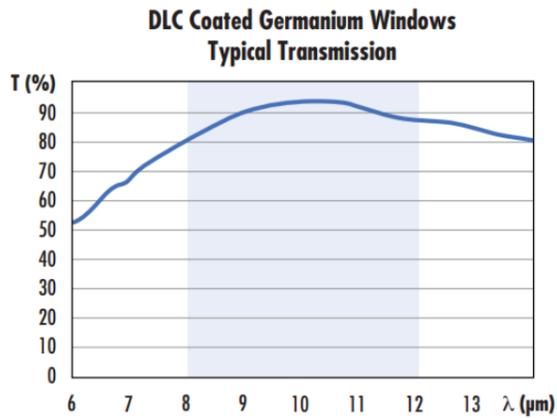
## Product Details

- Meets Severe Abrasion Requirements of ML-C-675C
- ≥90% Transmission from 8 - 11.5µm

- Ideal for Harsh Environments
- [Uncoated, 3-5 Micron BBAR, and 8 - 12 Micron BBAR Coated Germanium Windows](#) are 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](#).
- 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.

TECHSPEC® Diamond-Like Carbon (DLC) Coated Germanium Windows have been designed with durability in mind. Featuring a high efficiency broadband anti-reflection coating on one surface and a specially designed [DLC coating](#) on the other surface, these windows feature excellent transmission and environmental resistance. The DLC coated surface is designed to withstand temperature cycling from -80 to +160°F, salt spray for a continuous period of 24 hours, salt solubility for an immersion period of 24 hours, and 5,000 wiper oscillations in a sand and slurry mixture. Further, TECHSPEC DLC Coated Germanium Windows meet the MIL-C-675C requirements for severe abrasion.

## Technical Information



Specification	AR Coating	DLC Coating
Adhesion	per MIL-C-48497A Paragraph 4.5.3.1	per MIL-M-13508C Paragraph 4.4.6
Abrasion	Moderate, per MIL-C-48497A Paragraph 4.5.3.3	Severe, per MIL-C-675C Paragraph 4.5.10
Humidity	per MIL-C-48497A Paragraph 4.5.3.2	$\geq 24$ Hours per MIL-C-675C paragraph 4.5.8
Salt Solubility	-	$\geq 24$ Hours Immersion per MIL-C-675C paragraph 4.5.7
Salt Spray	-	$\geq 24$ Hours per MIL-C-675C paragraph 4.5.9
Temperature (°F)	-80 to +160 per MIL-C-48497A Paragraph 4.5.4.1	-80 to +160 per MIL-C-48497A Paragraph 4.5.4.1
Solubility and Cleaning	per MIL-C-48497A Paragraph 4.5.4.2	-
Water Solubility	24 Hours, per MIL-C-48497A Paragraph 4.5.5.3	-
Wiper	-	$\geq 5,000$ Wipes of Sand/Slurry per TS-1888

## 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 CO<sub>2</sub>
- [Shop Now](#)

## Compatible Mounts

