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38.1mm Dia. x 2mm Thick, 3-5µm AR Coated & DLC Coated, ISP Optics Silicon (Si) Window | DLC35-SI-W-38-2

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Diamond-Like Carbon (DLC) Coated Silicon Windows

Stock **#24-647** CLEARANCE **5 In Stock**

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1

+

S\$611^{.80}

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Volume Pricing	
Qty 1+	S\$611.80 each
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General	
DLC35-SI-W-38-2	Model Number:
Protective Window	Type:
Note: Arrow on substrate edge points towards DLC coated surface	

Physical & Mechanical Properties	
32.38	Clear Aperture CA (mm):
38.10 +0.00/-0.13	Diameter (mm):
2.00 ±0.13	Thickness (mm):
<3	Parallelism (arcmin):
Protective as needed	Bevel:
85	Clear Aperture (%):
Fine Ground	Edges:
0.27	Poisson's Ratio:
140	Young's Modulus (GPa):
1,150.00	Knoop Hardness (kg/mm²):

Optical Properties	
S1: DLC Coating S2: BBAR (3000-5000nm)	Coating:
Silicon (Si)	Substrate: □
3.422 @ 5µm	Index of Refraction (n _d):
40-20	Surface Quality:
AR: R _{avg} ≤0.5% @ 3000 - 5000nm	Coating Specification:
3000 - 5000	Wavelength Range (nm):
λ/10 @ 10.6µm	Surface Flatness (P-V):
AR: -80 to +160 per MIL-C-48497C DLC: -80 to +160 per MIL-C-48497C	Coating Temperature (°F):

Material Properties	
2.33	Density (g/cm³):
2.55	Coefficient of Thermal Expansion CTE (10 ⁻⁶ /°C):

Environmental & Durability Factors	
AR: Moderate, per MIL-C-48497C DLC: Severe, per MIL-C-48497C	Coating Abrasion:
AR: per MIL-C-48497C DLC: per MIL-C-48497C	Coating Adhesion:
AR: 24 Hours per MIL-C-48497C DLC: 24 Hours per MIL-C-48497C	Coating Humidity:
AR: N/A DLC: ≥72 Hours per MIL-C-675	Coating Salt Spray:
AR: N/A DLC: ≥24 Hours Immersion per MIL-C-675C	Coating Salt Solubility:
AR: per MIL-C-48497 DLC: per MIL-C-48497	Coating Solubility and Cleaning:
AR: N/A DLC: ≥1,000 Wipes of Sand/Slurry per TS-1888	Coating Wiper Durability:

Regulatory Compliance	
Compliant	RoHS 2015:
View	Certificate of Conformance:
Compliant	Reach 240:

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

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Product Details

- Meets Severe Abrasion Requirements of MIL-F-48616 and MIL-C-48497C
- High Transmission from 3 – 5µm
- Ideal for Harsh Environments
- [Diamond-Like Carbon \(DLC\) Coated Germanium Windows](#) Also Available

ISP Optics Diamond-Like Carbon (DLC) Coated Silicon Windows provide anti-reflection coating on one surface and a specially designed DLC coating on the other surface, making these windows highly durable and ideal for harsh environments. The DLC Coated surface is designed to withstand temperature cycling from -80 to +160°F, salt spray for a continuous period of 72 hours, and 1,000 wiper oscillations in a sand and slurry mixture. Further, these windows meet the MIL-F-48616 and MIL-C-48497C requirements for severe abrasion. Silicon features a Knoop Hardness of 1150 and low density, making it tougher than germanium substrates and suitable for weight-sensitive applications, respectively. ISP Optics Diamond-Like Carbon (DLC) Coated Silicon Windows are engineered for 3 to 5µm, making them ideal for infrared defense applications such as thermal imaging.

Technical Information

Specification	AR Coating	DLC Coating
Adhesion	per MIL-C-48497C	per MIL-C-48497C
Abrasion	Moderate, per MIL-C-48497C	Severe, per MIL-C-48497C
Humidity	24 Hours per MIL-C-48497C	24 Hours per MIL-C-48497C
Salt Solubility	-	≥24 Hours Immersion per MIL-C-675C
Salt Spray	-	≥72 Hours per MIL-C-675
Temperature (°F)	-80 to +160 per MIL-C-48497C	-80 to +160 per MIL-C-48497C
Solubility and Cleaning	per MIL-C-48497	per MIL-C-48497
Wiper	-	≥1,000 Wipes of Sand/Slurry per TS-1888
Coating Temperature (°F)	-80 to +160 per MIL-C-48497C	-80 to +160 per MIL-C-48497C