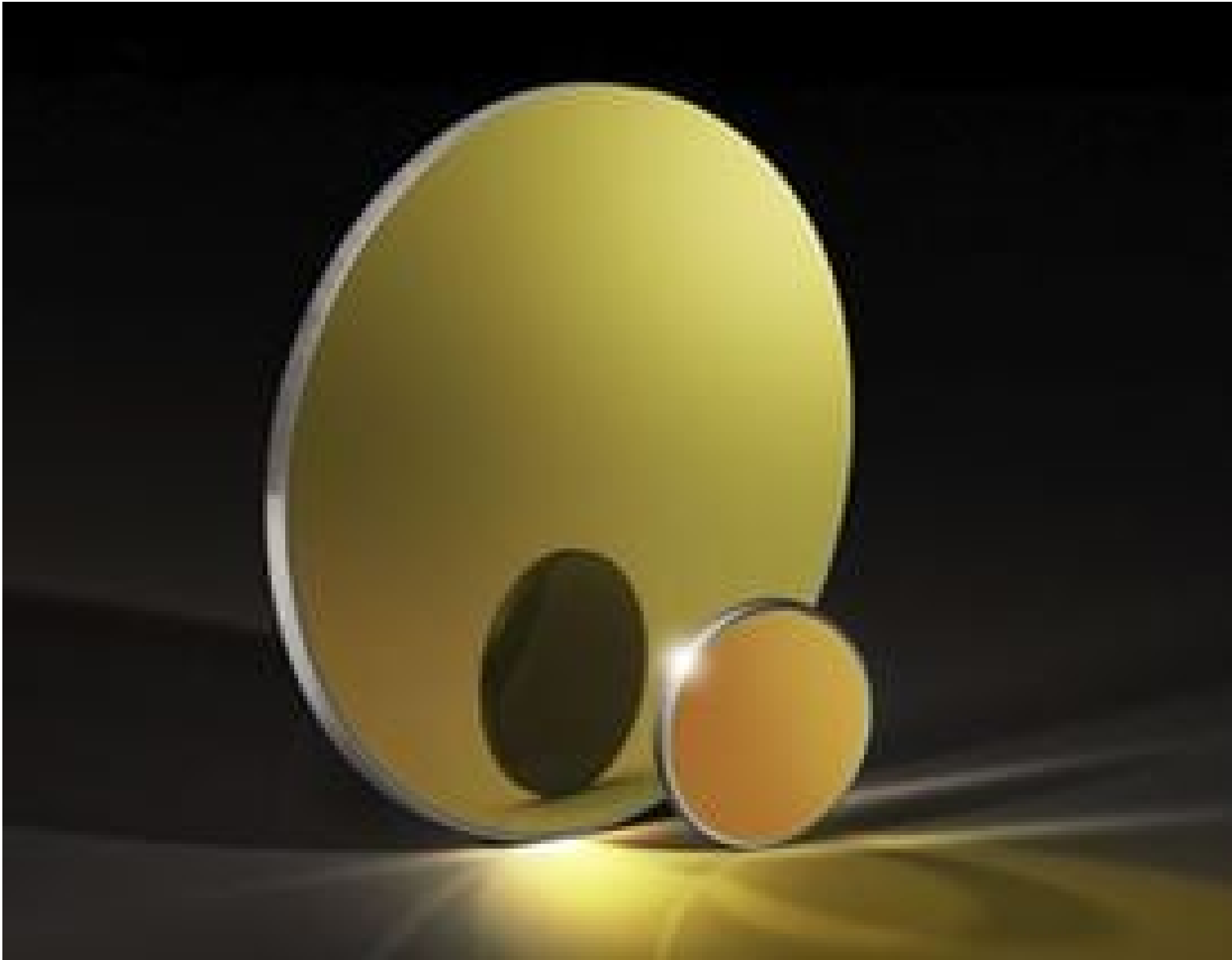


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38.1mm Dia. x 2mm Thick, 3-5µm AR Coated & DLC Coated, ISP Optics Silicon (Si) Window | DLC35-SI-W-38-2

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Diamond-Like Carbon (DLC) Coated Silicon Windows

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

-

1

+

C\$611^{.80}

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Product Downloads

General	
Protective Window	Type:
Arrow on substrate edge points towards DLC coated surface	Note:
DLC35-SI-W-38-2	Model Number:

Physical & Mechanical Properties	
Protective as needed	Bevel:
85	Clear Aperture (%):
32.38	Clear Aperture CA (mm):
38.10 +0.00/-0.13	Diameter (mm):
2.00 ±0.13	Thickness (mm):
Fine Ground	Edges:
1,150.00	Knoop Hardness (kg/mm²):
<3	Parallelism (arcmin):
0.27	Poisson's Ratio:
140	Young's Modulus (GPa):
Optical Properties	
S1: DLC Coating S2: BBAR (3000-5000nm)	Coating:
AR: R _{avg} ≤0.5% @ 3000 - 5000nm	Coating Specification:
3.422 @ 5µm	Index of Refraction (n _d):
Silicon (Si)	Substrate:
λ/10 @ 10.6µm	Surface Flatness (P-V):
40-20	Surface Quality:
3000 - 5000	Wavelength Range (nm):
AR: -80 to +160 per MIL-C-48497C DLC: -80 to +160 per MIL-C-48497C	Coating Temperature (°F):
Material Properties	
2.55	Coefficient of Thermal Expansion CTE (10 ⁻⁶ /°C):
2.33	Density (g/cm³):
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: ≥24 Hours Immersion per MIL-C-675C	Coating Salt Solubility:
AR: N/A DLC: ≥72 Hours per MIL-C-675	Coating Salt Spray:
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:

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

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

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