

50mm Dia., 3mm Thick, 400-1100nm HDAR Coated Fused Silica Window



Stock **#29-981** **8 In Stock**

-

1

+

£288.00

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-5        | £288.00 each                  |
| Qty 6-25       | £230.40 each                  |
| Qty 26-49      | £216.00 each                  |
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!

 Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Protective Window

Type:

Physical & Mechanical Properties

Protective as needed

Bevel:

90

Clear Aperture (%):

|                   |                          |
|-------------------|--------------------------|
| 45.00             | Clear Aperture CA (mm):  |
| 50.00 +0.00/-0.20 | Diameter (mm):           |
| 3.00 ±0.10        | Thickness (mm):          |
| Fine Ground       | Edges:                   |
| 522.00            | Knoop Hardness (kg/mm²): |
| <5                | Parallelism (arcsec):    |
| 0.16              | Poisson's Ratio:         |
| 73                | Young's Modulus (GPa):   |

Optical Properties

|                                                                                |                                        |
|--------------------------------------------------------------------------------|----------------------------------------|
| 67.8                                                                           | Abbe Number (v <sub>d</sub> ):         |
| Hardened VIS-NIR (400-1100nm)                                                  | Coating:                               |
| R <sub>avg</sub> <1.5% @ 400 - 1100nm<br>R <sub>abs</sub> <2.0% @ 400 - 1100nm | Coating Specification:                 |
| 1.458                                                                          | Index of Refraction (n <sub>d</sub> ): |
| Fused Silica                                                                   | Substrate:                             |
| 20-10                                                                          | Surface Quality:                       |
| λ/10                                                                           | Transmitted Wavefront, P-V:            |
| 400 - 1100                                                                     | Wavelength Range (nm):                 |
| -80 to +160 per MIL-M-13508C Paragraph 4.4.4                                   | Coating Temperature (°F):              |

Material Properties

|                                                                   |                                                              |
|-------------------------------------------------------------------|--------------------------------------------------------------|
| 0.52 (+5 to +35°C)<br>0.57 (0 to +200°C)<br>0.48 (-100 to +200°C) | Coefficient of Thermal Expansion CTE (10 <sup>-6</sup> /°C): |
| 2.20                                                              | Density (g/cm³):                                             |

Environmental & Durability Factors

|                                                    |                          |
|----------------------------------------------------|--------------------------|
| Severe, per MIL-C-675C Paragraph 4.5.10            | Coating Abrasion:        |
| Per MIL-M-13508C Paragraph 4.4.6                   | Coating Adhesion:        |
| ≥24 Hours per MIL-C-675C paragraph 4.5.8           | Coating Humidity:        |
| ≥24 Hours Immersion per MIL-C-675C paragraph 4.5.7 | Coating Salt Solubility: |
| ≥24 Hours per MIL-C-675C paragraph 4.5.9           | Coating Salt Spray:      |

Regulatory Compliance

|      |                             |
|------|-----------------------------|
| View | Certificate of Conformance: |
|------|-----------------------------|

## Product Details

- HDAR Coating Achieves Severe Abrasion Requirements of MIL-C-675C
- Low Reflectivity Across the VIS-NIR
- Ideal for Use in Harsh Environments
- Uncoated Fused Silica Windows Also Available

High Durability Anti-Reflection (HDAR) Coated Fused Silica Windows feature precision fused silica substrates with rugged HDAR coatings where frequent handling or cleaning are required. Similar to [diamond-like carbon \(DLC\) coatings](#), the HDAR coatings are designed to withstand temperature cycling from -80 to +160°F, high humidity for 24 hours, salt spray for a continuous period of 24 hours, and salt solubility for an immersion period of 24 hours. These coatings are deposited on fused silica which has excellent mechanical and thermal stability, ensuring high performance even in harsh environments. High Durability Anti-Reflection (AR) Coated Fused Silica Windows are ideal for aerospace, defense, and industrial applications, as well as any optical application requiring durable protective windows.

