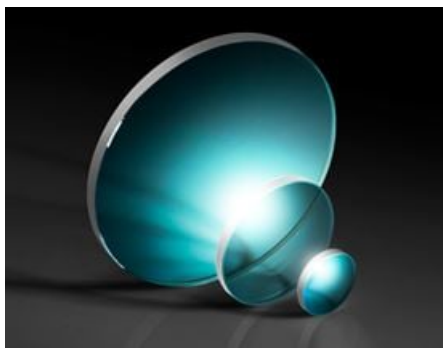


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High Durability Anti-Reflection (AR) Coated Sapphire Windows



- Achieves Severe Abrasion Requirements of MIL-C-675C
- Low Reflection Coatings for 400 - 1100nm or 2000 - 5000nm
- Ideal for Harsh Environments Requiring Thin Optics
- [Uncoated Sapphire Windows](#) are Also Available

Common Specifications

Physical & Mechanical Properties

Bevel:	Protective as needed	Clear Aperture (%):	90
Edges:	Fine Ground	Knoop Hardness (kg/mm²):	1900
Parallelism (arcmin):	≤3.5	Poisson's Ratio:	0.27
Young's Modulus (GPa):	435		

Optical Properties

Abbe Number (v_d):	72.24		
Axis Orientation:	Random	Birefringence ($n_o - n_e$):	0.008 for Visible Light Orthogonal to Optical Axis
Index of Refraction (n_d):	1.77	Substrate:	Sapphire (Al ₂ O ₃)
Surface Flatness (P-V):	2λ (typical)	Surface Quality:	80-50

Coating Temperature (°F):		-80 to +160 per MIL-M-13508C Paragraph 4.4.4	
Material Properties			
Coefficient of Thermal Expansion CTE (10 ⁻⁶ /°C):		8.8	
Density (g/cm³):		3.97	
Environmental & Durability Factors			
Coating Abrasion:		Severe, per MIL-C-675C Paragraph 4.5.10	
Coating Adhesion:		Coating Humidity:	≥24 Hours per MIL-C-675C paragraph 4.5.8
Coating Salt Solubility:		Coating Salt Spray:	≥24 Hours per MIL-C-675C paragraph 4.5.9

Technical Information

Products

Dia. (mm)	Thickness (mm)	Coating	Stock Number	Price	Buy
5.00	0.50	Hardened VIS-NIR (400-1100nm)	#18-461	€110,00 Qty 11+ €95,00	3-4 days
6.35	0.50	Hardened VIS-NIR (400-1100nm)	#18-462	€110,00 Qty 11+ €95,00	3-4 days
10.00	0.50	Hardened VIS-NIR (400-1100nm)	#18-463	€121,00 Qty 11+ €104,00	3-4 days
20.00	0.50	Hardened VIS-NIR (400-1100nm)	#18-464	€145,00 Qty 11+ €125,00	In Stock
25.00	0.50	Hardened VIS-NIR (400-1100nm)	#18-465	€174,00 Qty 11+ €150,00	3-4 days
50.80	3.18	Hardened VIS-NIR (400-1100nm)	#18-466	€573,00 Qty 11+ €493,00	3-4 days
5.00	0.50	Hardened BBAR (2000- 5000nm)	#18-467	€129,00 Qty 11+ €110,50	3-4 days
6.35	0.50	Hardened BBAR (2000- 5000nm)	#18-468	€129,00 Qty 11+ €110,50	3-4 days
10.00	0.50	Hardened BBAR (2000- 5000nm)	#18-469	€140,00 Qty 11+ €120,00	3-4 days
20.00	0.50	Hardened BBAR (2000- 5000nm)	#18-470	€164,00 Qty 11+ €141,00	3-4 days
25.00	0.50	Hardened BBAR (2000- 5000nm)	#18-471	€190,00 Qty 11+ €164,00	In Stock
50.80	3.18	Hardened BBAR (2000- 5000nm)	#18-472	€590,00 Qty 11+ €510,00	In Stock



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 Phone: 1-800-363-1992 :
www.edmundoptics.com