

Standard Substrates

Mirror Blanks and Filter Substrates

Acton substrates are made from select grades of the finest available optical materials. Mirror blanks are suitable for beam-steering requirements and front surface coatings. Filter substrates are qualified for transmission requirements down to 120nm. Mirror blanks and filter substrates are available with transmittance traces for an additional charge.



Mirror Blanks

Part Number	Diameter	Thickness	Substrate Material
W.5D-MB	0.5" (12.7mm)	0.250" (6.35mm)	Corning 7980 0C or equivalent
W1D-MB	1.0" (25.4mm)	0.250" (6.35mm)	Corning 7980 0C or equivalent
W1.5D-MB	1.5" (38.1mm)	0.200" (5mm)	Corning 7980 0C or equivalent
W2D-MB	2.0" (50.8mm)	0.375" (9.53mm)	Corning 7980 0C or equivalent

Filter Substrates

Part Number	Diameter	Thickness	Substrate Material
WFS-.5D (WCF-, WMF-)	0.5" (12.7mm)	0.079" (2mm)	UV Fused Silica, CaF ₂ , MgF ₂
WFS-1D (WCF-, WMF-)	1.0" (25.4mm)	0.098" (2.5mm)	UV Fused Silica, CaF ₂ , MgF ₂
WFS1.5D (WCF-, WMF-)	1.5" (38.1mm)	0.200" (5mm)	UV Fused Silica, CaF ₂ , MgF ₂
WFS-2D (WCF-, WMF-)	2.0" (50.8mm)	0.157" (4mm)	UV Fused Silica, CaF ₂ , MgF ₂

NOTES:

WFS= UV Fused Silica, WCF = CaF₂, WMF = MgF₂ | 2" Diameter CaF₂ and MgF₂ Filter Substrates are 5mm Thick

Specifications

Specifications	Mirror Blanks	Filter Substrates
Material:	UV Laser Grade Fused Silica	UV Grade Fused Silica, MgF ₂ , CaF ₂
Diameter Tolerance:	+0.00/-0.005"	+0.00/-0.005"
Thickness Tolerance:	+/-0.25mm	+/-0.25mm
Surface Figure:	Side 1: 1/10 Wave @ 632.8nm	Both sides: <2 Waves @ 632.8nm
Parallelism:	3 arc min	3 arc min
Scratch/Dig:	20-10	20-10
Chamfer:	0.5mm x 45 degrees	0.5mm x 45 degrees
Clear Aperture:	Central 85%	Central 85%

Standard Windows

Laser Windows

Acton Optics & Coatings windows are made from select grades of the finest available optical materials. VUV/UV windows are suitable for a large range of VUV-UV applications. Flat laser windows are suitable for high power laser applications and as substrates for mirrors and beamsplitters. Excimer-grade CaF_2 and MgF_2 substrates are available for laser cavity optics and are available with transmittance traces for an additional charge.



Fused Silica Laser Windows

Part Number	Diameter	Thickness	Substrate Material
W.5D-FL	0.5" (12.7mm)	0.250" (6.35mm)	Corning 7980 0C or equivalent
W1D-FL	1.0" (25.4mm)	0.250" (6.35mm)	Corning 7980 0C or equivalent
W1.5D-FL	1.5" (38.1mm)	0.200" (5mm)	Corning 7980 0C or equivalent
W2D-FL	2.0" (50.8mm)	0.375" (9.53mm)	Corning 7980 0C or equivalent

Excimer-Grade CaF_2 and MgF_2 Laser Windows

Part Number	Diameter	Thickness	Substrate Material
W1D-FLC	1.0" (25.4mm)	0.250" (6.35mm)	Excimer-Grade CaF_2
W1.5D-FLC	1.5" (38.1mm)	0.200" (5mm)	Excimer-Grade CaF_2
W2D-FLC	2.0" (50.8mm)	0.375" (9.53mm)	Excimer-Grade CaF_2
W1D-FLM	1.0" (25.4mm)	0.250" (6.35mm)	Excimer-Grade MgF_2
W1.5D-FLM	1.5" (38.1mm)	0.200" (5mm)	Excimer-Grade MgF_2
W2D-FLM	2.0" (50.8mm)	0.375" (9.53mm)	Excimer-Grade MgF_2

Specifications

Specifications	Fused Silica Laser Windows	CaF_2 , MgF_2 Excimer Laser Windows
Material:	UV Laser-Grade Fused Silica	Excimer-Grade CaF_2 , MgF_2
Diameter Tolerance:	+0.00/-0.005"	+0.00/-0.005"
Thickness Tolerance:	+/-0.25mm	+/-0.25mm
Surface Figure:	Both sides 1/10 Wave @ 632.8nm	Both sides: 1/10 Wave @ 632.8nm
Parallelism:	3 arc min	3 arc min
Scratch/Dig:	20-10	20-10
Chamfer:	0.5mm x 45 degrees	0.5mm x 45 degrees
Clear Aperture:	Central 85%	Central 85%

Acton Optics & Coatings can supply custom optics for your OEM applications.