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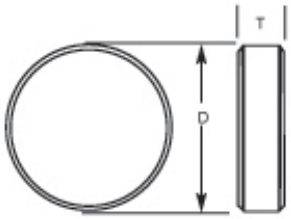
Research Grade Mirror Substrates

Plano / Plano Substrates
Plano / Plano Substrates-With Readouts
Plano / Concave Substrates

Plano Substrates



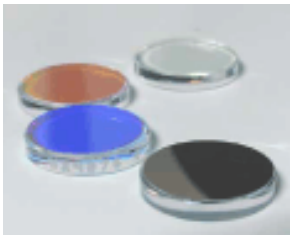
Gooch & Housego (from formerly General Optics) is offering our flat or concave superpolished research grade mirror substrates offer surfaces better than 1 Angstrom surface roughness. When combined with our high reflectivity / low loss IBS coatings, these mirrors lead the industry in efficiency and performance. These mirrors are offered in standard fused silica, zerodur, and silicon substrate material and in varying standard sizes. G&H can provide similar performance using other materials and we would be pleased to quote different sizes and shapes per your requirements.

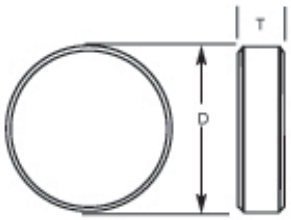
- Better than 1 Å surface roughness
- Laser quality 1/10 wave flatness, 10/5 scratch dig
- All G&H dielectric high reflector and metal films available
- Other sizes and materials in production and prototype volumes as requested

Part #	Material	Size	Thickness
GO-FS050-1	Fused Silica	0.500 inch	0.250inch
GO-FS100-1	Fused Silica	1.000 inch	0.250inch
GO-FS150-1	Fused Silica	1.500 inch	0.375inch
GO-FS200-1	Fused Silica	2.000 inch	0.375inch
GO-FS300-1	Fused Silica	3.000 inch	0.500inch
GO-FS400-1	Fused Silica	4.000 inch	0.630inch
GO-Z050-1	Zerodur	0.500 inch	0.250inch
GO-Z100-1	Zerodur	1.000 inch	0.250inch
GO-Z150-1	Zerodur	1.500 inch	0.375inch
GO-Z200-1	Zerodur	2.000 inch	0.375inch
GO-Z300-1	Zerodur	3.000 inch	0.500inch
GO-Z400-1	Zerodur	4.000 inch	0.630inch
GO-S050-1	Silicon	0.500 inch	0.250inch
GO-S100-1	Silicon	1.000 inch	0.250inch
GO-S150-1	Silicon	1.500 inch	0.375inch
GO-S200-1	Silicon	2.000 inch	0.375inch
GO-S300-1	Silicon	3.000 inch	0.500inch
GO-S400-1	Silicon	4.000 inch	0.630inch
GO-BK050-1	BK-7	0.500 inch	0.250inch
GO-BK100-1	BK-7	1.000 inch	0.250inch
GO-BK150-1	BK-7	1.500 inch	0.375inch
GO-BK200-1	BK-7	2.000 inch	0.375inch
GO-BK300-1	BK-7	3.000 inch	0.500inch
GO-BK400-1	BK-7	4.000 inch	0.630inch

Specifications	
Tolerances	All diameters are +0.00 / -0.005 inch All Thicknesses are +/- .020 inch
Side 1	Surface roughness less than 1 Angstrom RMS (A surface profiler readout for each substrate is available for an additional cost) Surface flatness is better than λ/10 measured at 633nm Surface quality is 10/5 per MIL -O-13830A
Side 2	Fused Silica and BK-7: Conventionally polished laser quality plano surface. Surface flatness is better than λ/4 measured at 633nm Surface quality 40-20 Surface roughness in not measured Silicon and Zerodur®: Fine ground
Parallelism	All substrates better than 3 minutes
Clear Aperture	Central 80%
Marking	All substrates marked with arrow pointing to side 1

Plano Substrates-With Readouts





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- Better than 1 Å surface roughness
- Laser quality 1/10 wave flatness, 10/5 scratch dig
- All GO dielectric high reflector and metal films available
- Other sizes and materials in production and prototype volumes as requested
- Includes Zygo Heterodyne Profiler Readout

Part #	Material	Size	Thickness
GO-FS050-1R	Fused Silica	0.500 inch	0.250inch
GO-FS100-1R	Fused Silica	1.000 inch	0.250inch
GO-FS150-1R	Fused Silica	1.500 inch	0.375inch
GO-FS200-1R	Fused Silica	2.000 inch	0.375inch
GO-FS300-1R	Fused Silica	3.000 inch	0.500inch
GO-FS400-1R	Fused Silica	4.000 inch	0.630inch
GO-Z050-1R	Zerodur	0.500 inch	0.250inch
GO-Z100-1R	Zerodur	1.000 inch	0.250inch
GO-Z150-1R	Zerodur	1.500 inch	0.375inch
GO-Z200-1R	Zerodur	2.000 inch	0.375inch
GO-Z300-1R	Zerodur	3.000 inch	0.500inch
GO-Z400-1R	Zerodur	4.000 inch	0.630inch
GO-S050-1R	Silicon	0.500 inch	0.250inch
GO-S100-1R	Silicon	1.000 inch	0.250inch
GO-S150-1R	Silicon	1.500 inch	0.375inch
GO-S200-1R	Silicon	2.000 inch	0.375inch
GO-S300-1R	Silicon	3.000 inch	0.500inch
GO-S400-1R	Silicon	4.000 inch	0.630inch
GO-BK050-1R	BK-7	0.500 inch	0.250inch
GO-BK100-1R	BK-7	1.000 inch	0.250inch
GO-BK150-1R	BK-7	1.500 inch	0.375inch
GO-BK200-1R	BK-7	2.000 inch	0.375inch
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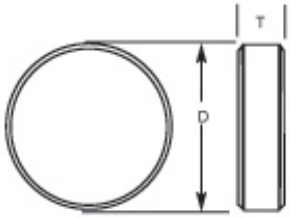
Parallelism	All substrates better than 3 minutes
Clear Aperture	Central 80%
Marking	All substrates marked with arrow pointing to side 1

Concave Substrates



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Part #	Material	Size	Thickness	Radii
GFS-0.25M-1	Fused Silica	1.000 inch	0.250inch	0.25 Meter
GFS-0.5M-1	Fused Silica	1.000 inch	0.250inch	0.5 Meter
GFS-1.0M-1	Fused Silica	1.000 inch	0.250inch	1.0 Meter
GFS-2.0M-1	Fused Silica	1.000 inch	0.250inch	2.0 Meter
GFS-3.0M-1	Fused Silica	1.000 inch	0.250inch	3.0 Meter
GFS-4.0M-1	Fused Silica	1.000 inch	0.250inch	4.0 Meter
GFS-5.0M-1	Fused Silica	1.000 inch	0.250inch	5.0 Meter
GFS-10.0M-1	Fused Silica	1.000 inch	0.250inch	10.0 Meter
GFS-20.0M-1	Fused Silica	1.000 inch	0.250inch	20.0 Meter
GFS-0.25M2-1	Fused Silica	2.000 inch	0.250inch	0.25 Meter
GFS-.5M2-1	Fused Silica	2.000 inch	0.250inch	0.5 Meter
GFS-1.0M2-1	Fused Silica	2.000 inch	0.250inch	1.0 Meter
GFS-2.0M2-1	Fused Silica	2.000 inch	0.250inch	2.0 Meter
GFS-3.0M2-1	Fused Silica	2.000 inch	0.250inch	3.0 Meter
GFS-4.0M2-1	Fused Silica	2.000 inch	0.250inch	4.0 Meter
GFS-5.0M2-1	Fused Silica	2.000 inch	0.250inch	5.0 Meter
GFS-10.0M2-1	Fused Silica	2.000 inch	0.250inch	10.0 Meter
GFS-20.0M2-1	Fused Silica	2.000 inch	0.250inch	20.0 Meter

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