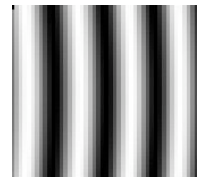


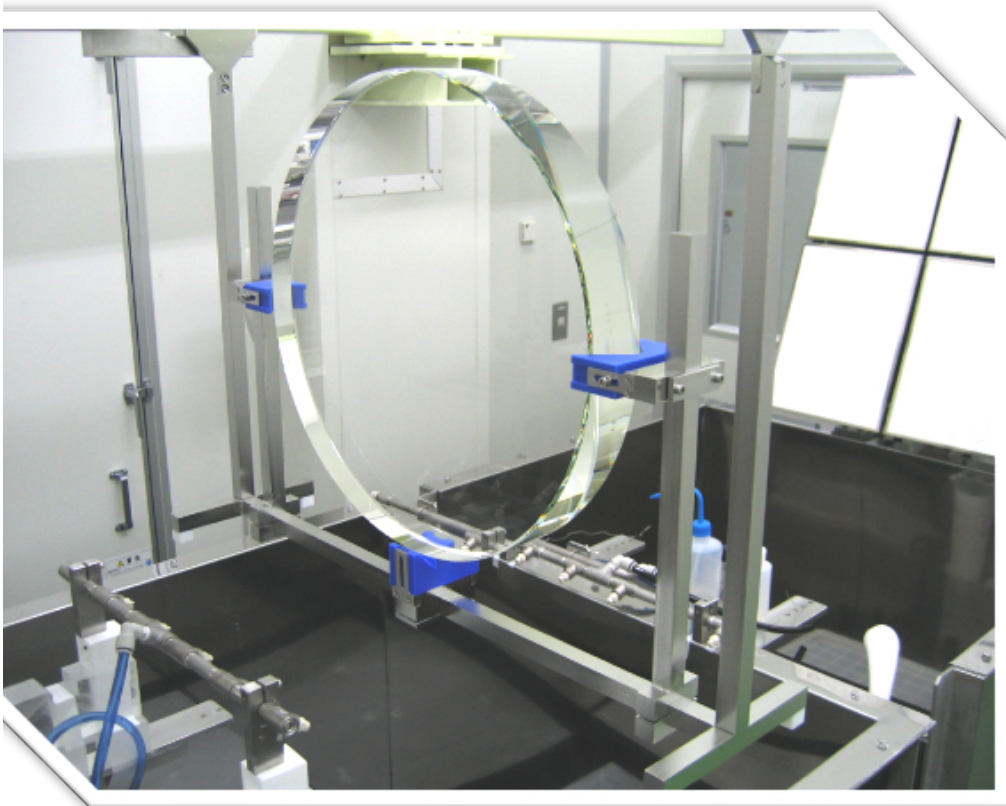


Aperture Optical Sciences

## PRECISION REFERENCE FLATS & MIRRORS

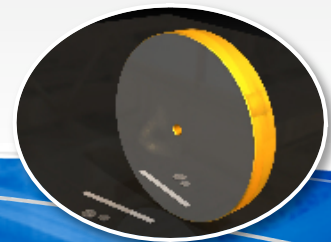


Standard Reference Flats & Mirrors are available sizes from 4 inches through 24 inches and calibrated flatness up to  $\lambda/30$ . Aperture Optical Sciences Inc. provides sales, service, and engineering support with manufacturing by our collaborative partner, Okamoto Optics, of Yokohama Japan. Comprehensive design and assembly services are available on request. We apply advanced finishing techniques & technology to produce dependable high quality optics for commercial, aerospace & defense, scientific and industrial manufacturing applications. Certified, NIST traceable calibration services are available at our Connecticut facility.



### SPECS AND OPTIONS

<b>Flatness</b>	Up to $\lambda/30$ PVr
<b>Diameter</b>	4 to 24 inch
<b>Surface Quality</b>	up to 10/5
<b>Coating</b>	Al + SiO for R > 90% @ 633nm, normal incidence (additional options available)
<b>Materials</b>	Fused Silica, Ohara ClearCeram-Z® Schott Zerodur® Corning ULE® SiC, others
<b>Custom Designs</b>	Call for specifications and availability



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part number	Specification	1000-4	1000-6	1000-8	1000-10	1000-12	1000-18	1000-20	1000-24
Diameter		inch / mm	inch / mm	inch / mm	inch / mm	inch / mm	inch / mm	inch / mm	inch / mm
		4.5 101.6	6.5 152.4	8.5 215.9	10.5 266.7	12.5 317.5	19 482.6	21 533.4	25.5 647.7
thickness		0.75 19.05	1.08 27.52	1.42 35.98	1.75 44.45	2.08 52.92	3.17 80.43	3.50 88.90	4.25 107.95
CA		4 100	6 150	8 200	10 250	12 300	18 450	20 500	24 600
Flatness	$\lambda/20$	●	●	●	●	●	●	●	$\lambda/10$
	$\lambda/30$	○	○	○	○	○	○	○	
	PSD	○	○	○	○	○	○	○	○
	Slope / Gradient	< $\lambda/100$ rms	< $\lambda/100$ rms	< $\lambda/100$ rms	< $\lambda/100$ rms	< $\lambda/100$ rms	< $\lambda/100$ rms	< $\lambda/100$ rms	< $\lambda/100$ rms
Edge	Ground with holding channel	●	●	●	●	●	●	●	●
	Polished with holding channel	○	○	○	○	○	○	○	○
	no channel	○	○	○	○	○	○	○	○
Bevel	polished, ___ x 45 deg. Face Width	0.04 1	0.04 1	0.04 1	0.08 2	0.08 2	0.12 3	0.20 5	0.20 5
S/D	20/10	●	●	●	●	●	●	●	●
Parallelism	3 arc-min	●	●	●	●	●	●	●	●
	<10 arc-sec	○	○	○	○	○	○	○	○
S2 surface	fine ground	●	●	●	●	●	●	●	●
	commercial polish	○	○	○	○	○	○	○	○
	for trans wavefront < $\lambda/10$	○	○	○	○	○	○	○	○
Coating S1	none	●	●	●	●	●	●	●	●
	R>90%	○	○	○	○	○	○	○	○
	R<0.05%	○	○	○	○	○	○	○	○
S2 Coating	none	●	●	●	●	●	●	●	●
	R>90%	○	○	○	○	○	○	○	○
	R<0.05%	○	○	○	○	○	○	○	○
Materials	OHARA Clearceram	●	●	●	●	●	●	●	●
	Schott Zerodur	○	○	○	○	○	○	○	○
	Fused Silica	○	○	○	○	○	○	○	○
	Silicon Carbide	○	○	○	○	○	○	○	○
	Pyrex	○	○	○	○	○	○	○	○
Storage Container	PET-G	●	●	●	●	●	●	●	●
	Hard Shell w/ foam interior	○	○	○	○	○	○	○	○
Custom Options available		Custom Mounting, Lightweighting, Custom Dimensions Mounting Inserts, Edge Features, Custom Coatings, Design Services						standard	●
								optional	○



Aperture Optical Sciences, Inc. works in collaboration with Okamoto Optics of Yokohama Japan to create custom optics, optical instruments, and systems to customers worldwide. We also provide opto-mechanical design, applications engineering, and technology development services. Information on custom optics and extended services can be found at [www.apertureos.com](http://www.apertureos.com) and [www.okamoto-optics.com](http://www.okamoto-optics.com).

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