

Optical substrates

Product Description:

Precision Micro-Optics offers Optical substrates made of a variety of glass materials depending on the applications. The applications range from fused quartz parts in optics and fiber optical communications to borosilicate glass parts in semi-conductor manufacturing. Below is the general specs and custom requirements are welcome.



Figure 1: Optical substrates

Features:

- A variety of glass materials are available
- Wafer size from 2 to 8 inches are available for all types
- Thin wafer down to 50 μ m for 1 inch, 100 μ m for 2 inch, 125 μ m for 3 inch and 170 μ m for 4 inch are available
- Ultra Flat wafers down to less than 3 μ m for 2 inch TTV, 5 μ m for 3 inch TTV, 8 μ m for 4 inch TTV and 15 μ m for 6 inch TTV are available upon request

Specification:

Materials		Fused silica/borosilicate glass/B270 etc			
SPEC	Unit	3"	4"	5"	6"
Diameter (Square)	mm	76.2	100	125	150
Tolerance ($\pm$)	mm	0.25	0.5	0.5	0.5
Thickness ($\pm$)	mm	≥ 0.1	≥ 0.18	≥ 0.3	≥ 0.5
Primary Reference Flat	mm	22 or customized	32.5 or customized	42.5 or customized	57.5 or customized
TTV	μ m	$\leq 8\mu$ m	$\leq 10\mu$ m	$\leq 15\mu$ m	$\leq 20\mu$ m
BOW	μ m	$\pm 20\mu$ m	$\pm 25\mu$ m	$\pm 40\mu$ m	$\pm 40\mu$ m
LTV (5mmX5mm)	μ m	$\leq 2\mu$ m	$\leq 2\mu$ m	$\leq 2\mu$ m	$\leq 2\mu$ m
Wrap	μ m	$\leq 30\mu$ m	$\leq 40\mu$ m	$\leq 50\mu$ m	$\leq 50\mu$ m
PLTV	%	$\geq 90\%$ (5mmX5mm)	$\geq 90\%$ (5mmX5mm)	$\geq 90\%$ (5mmX5mm)	$\geq 90\%$ (5mmX5mm)
Edge Rounding	mm	Compliant with SEMI M1.2 Standard/refer to IEC62276			
Surface Type		Single Side Polished /Double Sides Polished			
Polished side Ra	nm	≤ 1			
Back Side Criteria	μ m	general 0.2-0.5 or as customized			
Appearance		No cracks, saw marks, stains, striations, Scratch and Contamination			