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Silicon Materials Site/125mm wafers

Material Properties

Parameter	Characteristic	ASTM Control Method
Type/Dopant	P, Boron N, Phosphorous N, Antimony N, Arsenic	F42
Orientations	<100>, <111> slice off orientations per customer's specifications	F26
Oxygen Content	Intrinsic Custom tolerances per customer's specification	F1188
Carbon Content	< 0.5 ppmA	F1391
Resistivity ranges - P, Boron - N, Phosphorous - N, Antimony - N, Arsenic	0.001 - 50 ohm cm 0.1 - 40 ohm cm 0.005 - 0.025 ohm cm < 0.005 ohm cm	F84

Mechanical Properties

Parameter	Prime	Monitor/ Test A	Test	ASTM Method
Diameter				F613
- Nominal	125	125	125	
- Tolerance	. 0.5	. 0.5	. 0.5	
Thickness (.m)				F533
- Nominal	625, 1000	625, 1000	625, 1000	
- Tolerance	. 15, 20	. 25	. 50	
TTV (.m)	< 6	< 8	< 15	F657
Bow (.m)	< 20	< 40	< 40	F657
Wrap (.m)	< 20	< 40	< 40	F657
Edge Rounding	Compliant with ASTM F928-86			F928
Primary/Secondary Flats	Compliant with SEMI M1 Standard per customer requirement			F26, F671

Surface Quality

Parameter	Prime	Monitor/ Test A	Test	ASTM Method
Front Side Criteria				
Contamination, Particles @ >0.3 .m	<= 30	<= 30	<= 30	F523
Haze	None	None	None	F523
Pits	None	None	None	F523
Orange peel	None	None	None	F523

Saw Marks, striations	None	None	None	F523
Back Side Criteria				
Cracks, crowsfeet, saw marks, stains	None	None	None	F523
Surface condition	Caustic or acid etched			F523

