




KEY FEATURES

-  Low Oxygen Large Heat Field Process
-  High-efficiency wafers that match customers' differentiated needs
-  Adequate capacity reserves

Material properties

Item(unit)	Specification	Inspection method
Conductivity Type	N	PN testing machine
Dopant	Phosphorus	/
Crystallinity	Monocrystalline	Preferential etch techniques (ASTM F47-88)
Etch pit density (dislocation density)	$\leq 500\text{cm}^{-2}$	Preferential etch techniques (ASTM F47-88)
Surface orientation	$\langle 100 \rangle \pm 3^\circ$	X-ray diffraction method
Side orientation	$\langle 010 \rangle, \langle 001 \rangle \pm 3^\circ$	X-ray diffraction method
Oxygen contents (ppma)	≤ 12	FTIR (ASTM F121-83)
Carbon contents (ppma)	≤ 1	FTIR (ASTM F123-91)

Electrical properties

Item(unit)	Specification	Inspection method
Lifetime (μs)	≥ 800	BCT-400
Resistivity($\Omega \cdot \text{cm}$)	0.3-2.1	Automatic sorting machine

Rule of geometry properties

Item(unit)	Specification	Inspection method
Geometry	Quasi square	/
Bevel edge shape	Right angle	/
Square length (mm)	$210 \pm 0.25\text{mm}$	Automatic sorting machine
Diagonal length (mm)	$295 \pm 0.25\text{mm}$	Automatic sorting machine
Chamfer length projection (mm)	$1.41 \pm 0.5\text{mm}$	Automatic sorting machine
Verticality	$90 \pm 0.15^\circ$	Automatic sorting machine
Thickness (μm)	$130 + 10 / - 10$	Automatic sorting machine
	$135 + 10 / - 10$	Automatic sorting machine

Appearance Quality

Item(unit)	Specification	Inspection method
Surface quality	No visual defects	Automatic sorting machine
	No color difference, No bright line	
Chipping	Depth $\leq 0.3\text{mm}$, Length $\leq 0.5\text{mm}$;	Automatic sorting machine
	Count $\leq 2/\text{pcs}$, no V-chip	
Saw mark(μm)	≤ 15	Automatic sorting machine
Warpage (μm)	≤ 40	Automatic sorting machine
TTV (μm)	≤ 25	Automatic sorting machine
Micro cracks / Holes	None	Automatic sorting machine
Unfilled corner	None	Automatic sorting machine