

N-type-G12 (210×210*295) A

Monocrystalline Wafer



Comprehensive system certification

ISO9001:2022

ISO14001:2022

ISO45001:2022

Gokin

Key parameters

The file version 202406

Conductivity type	N-type	PN testing machine
Dopant	Phos.(磷)	/
Resistivity/ $\Omega\cdot\text{cm}$	0.6-1.6	Wafer inspection system
Lifetime/ μs	≥ 800	BCT-400
Oxygen concentration/ppma	≤ 12	FTIR (ASTM F121-83)
Carbon Concentration /ppma	≤ 1	FTIR (ASTM F123-91)

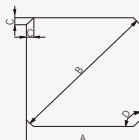
Material properties

Growth method	CZ	/
Crystallinity	Monocrystalline	/
Etch pit density (dislocation density)/pcs/ cm^2	≤ 500	Preferential Etch Techniques(ASTM F47-88)
Surface orientation/ $^\circ$	$\langle 100 \rangle \pm 3$	X-ray Diffraction Method
Orientation of pseudo square sides/ $^\circ$	$\langle 010 \rangle, \langle 001 \rangle \pm 3$	X-ray Diffraction Method

Geometric dimensions and surface properties

Wafer model	G12	/
Geometry	Quasi square	/
Bevel edge shape	Round	/
Wafer Side length/mm	210/210 $\pm$ 0.25	AOI
Wafer Diameter/mm	295 $\pm$ 0.25	AOI
Arc length projection/mm	1.41 $\pm$ 0.5	AOI
Angle between adjacent sides/ $^\circ$	90 $\pm$ 0.15	AOI
Thickness/ μm	130/135/140 $\pm$ 10	AOI
Batch mean/ μm	$\geq 130/135/140$	AOI
TTV/ μm	≤ 25	AOI
Saw Mark/ μm	≤ 15	AOI
Bow/ μm	≤ 40	AOI
Warpage/ μm	≤ 40	AOI
Cutting method	DW	/
Surface quality	No visual defects (no stains, no finger prints, no oil, no glue). No color difference, No bright line	AOI
Chipping	Depth $\leq$ 0.3 mm , Length $\leq$ 0.5 mm ; Count $\leq$ 2 /pcs, no V-chip	Naked eyes or wafer inspection system
Micro cracks / holes	None	AOI

Schematic diagram of wafer size



A.Shape/Size: 210 $\pm$ 0.25 mm
B.Diagonal: 295 $\pm$ 0.25 mm
C.Corner Length: 1.41 $\pm$ 0.5 mm
D.Right Angle: 90 $\pm$ 0.15 $^\circ$