JHPVTECH

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Monocrystalline Wafer

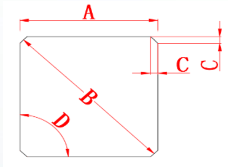
Comprehensive system certification

ISO 9001:2015

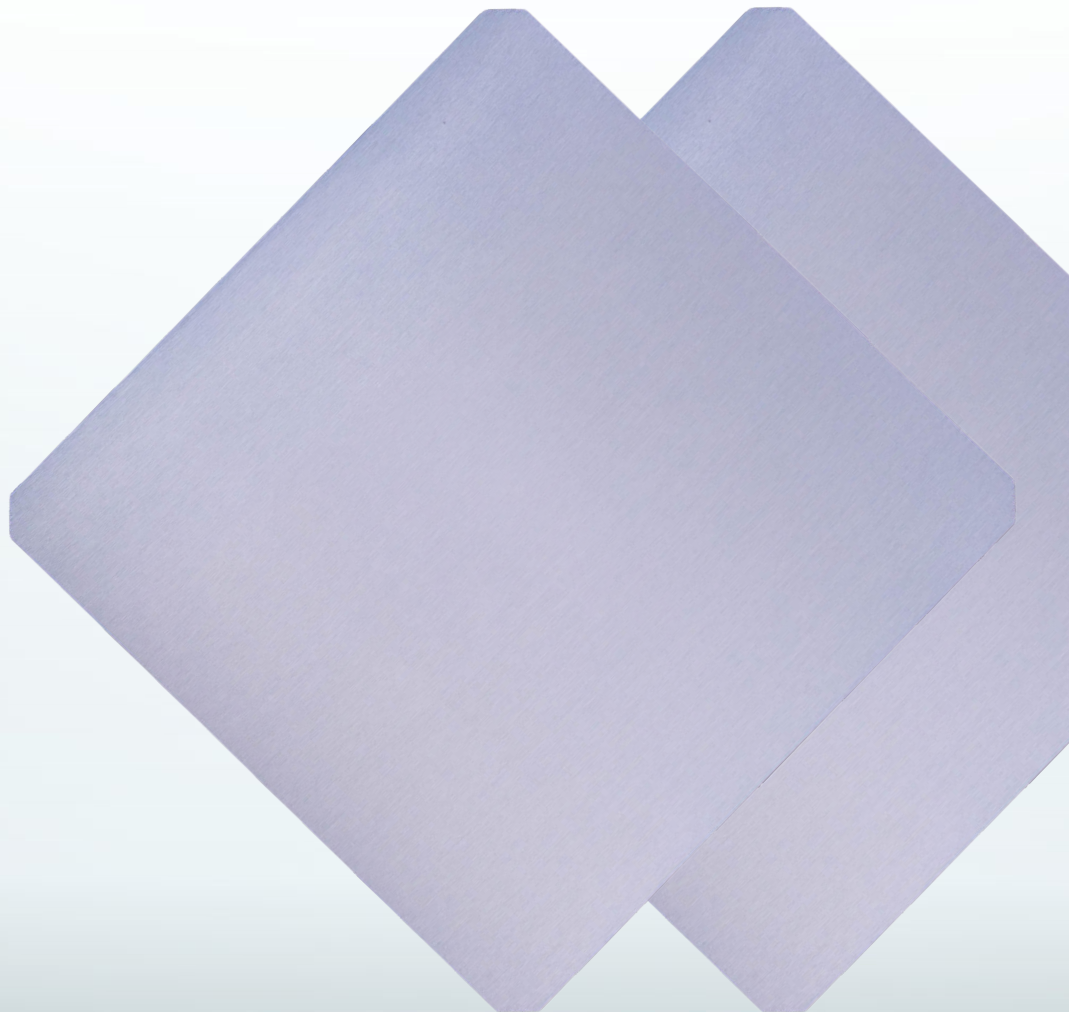
ISO 14001:2015

OHSAS 18001:2018

Schematic diagram of wafer size



Size：M10
A：182.2±0.25mm
B：ϕ247±0.25mm
C：7.72±0.5mm
D：90±0.15°



P-type-M10-Res0.4~1.1-A Grade

Monocrystalline Wafer Specification

P-type-M10-Res0.4~1.1-A Grade

Key parameters

Conductivity type	P-type	P/N type tester(DLY-2 P/N)
Dopant	Ga.(镓)	--
Resistivity/Ω.cm	0.4-1.1	Wafer inspection system
MCLT(Minority carrier lifetime)/μs	≥70	QSSPC /Transient with injection level:1E15cm^{-3}(Sinton BCT-400)
Oxygen concentration [Oi]/at/cm^3	≤7.5×10^{17}	FTIR(ASTM F121-83)
Carbon Concentration [Cs]/at/cm^3	≤5.0×10^{16}	FTIR(GB/T 1558-2009)

Material properties

Growth method	CZ	--
Crystallinity	Monocrystalline	--
Etch pit density (dislocation density)/pcs/cm^2	≤500	Preferential Etch Techniques(ASTM F47-88)
Surface orientation/°	<100>±3	X-ray Diffraction Method (ASTM F26-1987)
Orientation of pseudo square sides/°	<010>, <001>±3	X-ray Diffraction Method (ASTM F26-1987)

Geometric dimensions and surface properties

Wafer model	M10		--
Geometry	Pseudo square		--
Bevel edge shape	Round		--
Wafer Side length/mm	182.2±0.25		Wafer inspection system
Wafer Diameter/mm	φ247±0.25		Wafer inspection system
Arc length projection/mm	7.72±0.5		Wafer inspection system
Angle between adjacent sides/°	90±0.15		Wafer inspection system
Thickness/μm	155±10	150±10	Wafer inspection system
Batch mean/μm	≥155	≥150	Wafer inspection system
Total thickness variation/μm	≤25		Wafer inspection system
Saw marks/μm	≤13		Wafer inspection system
Bow/μm	≤40		Wafer inspection system
Warp/μm	≤40		Wafer inspection system
Cutting method	DW		--
Surface quality	as cut and cleaned, no visible contamination,color difference (as determined by standard sample) (oil or grease,finger prints, spot stains, epoxy/glue residue are not allowed)		Wafer inspection system
Chip	depth≤0.3mm & length≤0.5mm,Max 1/pcs, no V-chip		Naked eyes or wafer inspection system
Micro cracks / holes	Not allowed		Wafer inspection system

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Specifications subjects to technical changes and test , Jinghong Energy Technology Co., Ltd reserves the right of final interpretation

Version No: EN 202401