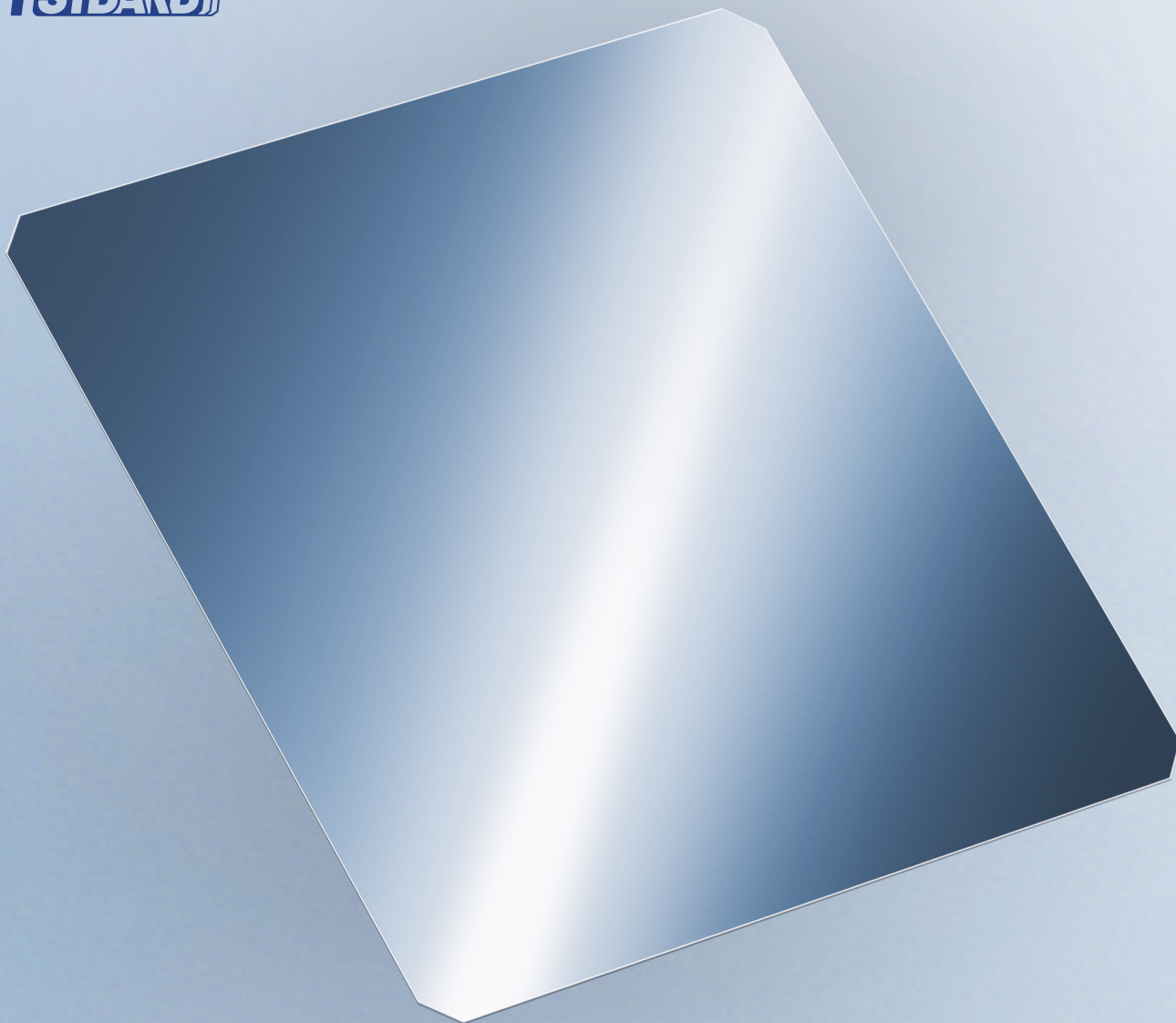




Mono Silicon Wafer

Data Sheet

N-Type 182*210±0.25mm

PT.Standard Energy Indonesia

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Mono Silicon Wafer

Data Sheet

N-Type 182*210±0.25mm

Material Performance Parameters

Conductivity Type	N	P/N testing machine
Dopant	Phosphorus	/
Crystallinity	Single crystal	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
Side orientation	$\langle 010 \rangle, \langle 001 \rangle \pm 3^\circ$	X-ray diffraction
Oxygen contents (ppma)	≤ 11	FTIR (ASTM F121-83)
Carbon contents (ppma)	≤ 1	FTIR (ASTM F123-91)
Lifetime (μs)	≥ 1000	BCT-400
Resistivity ($\Omega\cdot\text{cm}$)	0.6-1.6	Silicon wafer automatic inspection equipment

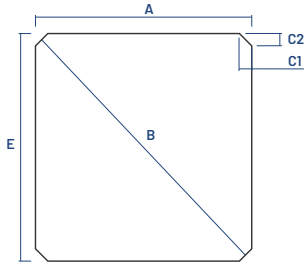
Geometric Rule Parameters

Geometry	Quasi square	/
Chamfered edge shape	Right angle	/
Wafer margins (mm)	182*210±0.25	Silicon wafer automatic inspection equipment
Wafer diameter (mm)	$\phi 272 \pm 0.25\text{mm}$	Silicon wafer automatic inspection equipment
Arc length projection (mm)	4.57/3.93 ±0.5mm	Silicon wafer automatic inspection equipment
Perpendicularity	90±0.15°	Silicon wafer automatic inspection equipment
Thickness specification (μm)	130 + 10/ - 10	Silicon wafer automatic inspection equipment
	135 + 10/ - 10	Silicon wafer automatic inspection equipment

Appearance Quality

Surface quality	No visible pollution	Silicon wafer automatic inspection equipment
	No color difference, No bright lines	
Edge Chipping	Depth $\leq 0.3\text{mm}$, Length $\leq 0.5\text{mm}$	Silicon wafer automatic inspection equipment
	Count $\leq 2/\text{pcs}$, no V-shaped	
Saw mark (μm)	≤ 15	Silicon wafer automatic inspection equipment
Warp/bending degree (μm)	≤ 40	Silicon wafer automatic inspection equipment
TTV (μm)	≤ 25	Silicon wafer automatic inspection equipment
Micro-crack/void	None	Silicon wafer automatic inspection equipment

Wafer dimensions



Size: 182*210 ±0.25mm
A: 182 ±0.25mm
E: 210 ±0.25mm
B: $\phi 272 \pm 0.25\text{mm}$
C1: 4.57 ±0.5mm
C2: 3.93 ±0.5mm