Wafer

N-type
M10-Res0.4~1.6-A

TOPON

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DRIVING ONWARD FOR GREEN ENERGY

Monocrystalline Silicon Wafer Specification

N-type-M10-Res 0.4~1.6-Grade A

Key Parameters

Conductive Type	N-type	P/N Type Tester (DLY - 2 P/N)
Doping Element	Phos. (Phosphorus)	--
Resistivity/Ω·cm	0.4-1.6	Silicon Wafer Automatic Testing Equipment
Minority Carrier Lifetime/μs	≥1000	Transient Photoconductance Decay Method
Interstitial Oxygen Content/at/cm^3	≤6.0×10^{17}	Fourier Transform Infrared Spectrometer (ASTM F121-83)
Substitutional Carbon Content/at/cm^3	≤5.0×10^{16}	Fourier Transform Infrared Spectrometer (GB/T1558-2009)

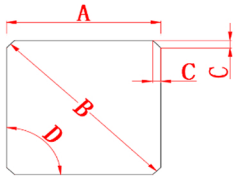
Material Properties

Growth Method	Czochralski Method	--
Crystallinity	Single Crystal	--
Dislocation Density/pcs/cm^2	≤500	Preferred Chemical Etching Method(ASTM F47-88)
Surface Crystal Orientation/°	<100>±3	X-ray Diffractometer(ASTMF26-1987)
Side Crystal Orientation/°	<010>, <001>±3	X-ray Diffractometer(ASTMF26-1987)

Geometric Dimensions and Surface Properties

Silicon Wafer Model	M10	--
Geometric Shape	Standard	--
Chamfered Edge Shape	Rounded	--
Silicon Wafer Edge Distance/mm	182.2±0.25	Silicon Wafer Automatic Testing Equipment
Silicon Wafer Diameter/mm	Φ247±0.25	Silicon Wafer Automatic Testing Equipment
Arc Length Projection/mm	7.72±0.5	Silicon Wafer Automatic Testing Equipment
Perpendicularity/°	90±0.15	Silicon Wafer Automatic Testing Equipment
Thickness/μm	130±8	Silicon Wafer Automatic Testing Equipment
Batch Thickness/μm	≥130	Silicon Wafer Automatic Testing Equipment
TTV/μm	≤20	Silicon Wafer Automatic Testing Equipment
Scratch/μm	≤13	Silicon Wafer Automatic Testing Equipment
Warpage/μm	≤40	Silicon Wafer Automatic Testing Equipment
Bow/μm	≤40	Silicon Wafer Automatic Testing Equipment
Cutting Method	Diamond Wire Cutting	--
Surface Quality	The surface is clean, with no visible pollution, and color deviation (judged according to standard sample pieces)	Silicon Wafer Automatic Testing Equipment
Edge Chipping	Depth≤0.3mm&Length≤0.5mm, no more than 1 piece,no V - shaped edge chipping	Manual Inspection or Silicon Wafer Automatic Testing Equipment
Hidden Cracks/Pores	Not Allowed	Silicon Wafer Automatic Testing Equipment

Schematic diagram of silicon wafer dimensions



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