

8-inch 4H n-Type Silicon Carbide Product Specifications

Property	Production grade	Dummy grade	Units
Crystal Characteristics			
Polytype	4H		
Doping Type	n-type		
Dopant	Nitrogen		
Surface Orientation	4.0° toward <11-20> ± 0.5°		degree
Resistivity	0.015~0.025		Ohm-cm
Wafer Mechanical Characteristics			
Diameter	200.0 ± 0.2		mm
Thickness	500.0 ± 25.0		μm
Edge profile	RT type		
Notch orientation	[1-100]±5°		degree
Notch Angle	90° +5°/-1°		degree
Notch Depth	1 ~ 1.25		mm
Back marking	On the right of notch		
Bow	≤ 15	≤ 25	μm
Warp	≤ 25	≤ 60	μm
Total Thickness Variation (TTV)	≤ 5	≤ 10	μm
Local Thickness Variation (LTV)	≤ 3	≤ 5	μm
Surface Roughness (10μm×10μm)	≤ 0.2		nm
Substrate Quality			
Etch Pit Density (EPD)	≤ 6500	≤ 16000	ea/cm ²
Basal Plane Dislocation (BPD)	≤ 800	≤ 5000	ea/cm ²
Threading Screw Dislocation (TSD)	≤ 100	≤ 800	ea/cm ²
Threading Edge Dislocation (TED)	≤ 6000	≤ 10000	ea/cm ²
Micropipe (MPD)	≤ 0.15	≤ 5	ea/cm ²
Edge Chips and Indents	None	None	ea
Visual Carbon Inclusions	≤ 0.05	NA	% area
Visible Scratches	None	None	mm
Cracks	None	None	ea
Metal (K,Ca,Ti,Cr,Mn,Fe,Co,Ni,Cu,Zn)	≤ 5E+10		atoms/cm ²