

6inch N-Type SiC Ingot

Parameter	Unit	Specification Value		Remark
Grade		Production Grade	Dummy Grade	
Diameter	mm	150.0 ±0.25	150.0±0.5	
Dopant		Nitrogen		
Surface Orientation		4 °toward<11-20>± 0.5°		
Orientation Notch			[1-100] direction± 2°	
Primary Flat Orientation		<11-20>± 5.0°		
Primary Flat Length	mm	47.5 ±2.0	47.5 ±1.5	
Micropipe Density	cm ²	≤ 0.2	≤ 5	
EPD	cm ²	≤3500	NA	
BPD	cm ²	≤400	NA	
TED	cm ²	≤3000	NA	
TSD	cm ²	≤50	NA	
Resistivity (ave)	Ω·cm	0.015-0.025	0.015-0.028	
Thickness	mm	≥12mm		
Edge Chips (No EE)	mm	≤ 1mm and ≤ 2 pcs	None greater than 0.5 mm width or depth. No limit on chips below 0.5mm width and depth.	
Ra_on_as_cut_surface_dome_side		≤ 5 μm for as-cut flat surface		
Ra_on_as_cut_surface_seed_side		≤ 5 μm for as-cut flat surface		
Hex Plates by high-intensity light		Dimensions <1mm, accumulative area <1%	Dimensions <2mm, accumulative area <5%	
Polytype Area by high-intensity light		None	accumulative area ≤10%	
Cracks by high-intensity light		None	None	
Surface requirement	μm/nm	For laser cutting: flatness≤5μm, parallelism≤20μm, surface roughness≤30nm For multi-line cutting: flatness≤ 5μm, no requirement for parallelism and roughness, 4° toward<11-20>± 0.5° for C-plane, no requirement for Si plane	For laser cutting: flatness≤5μm, parallelism≤20μm, surface roughness≤30nm Wire cutting: flatness≤ 5μm, no requirement for parallelism and roughness, 4° toward<11-20>± 0.5° for C-plane, no requirement for Si plane	