Specification of n-type SiC wafer

100/150 mm n-type SiC Wafer Specification

Property		4 inch	6 inch
Diameter		100.0 ± 0.5 mm	150.0 ± 0.5 mm
Thickness (Center Point)		350 ± 25 μm	350 ± 25 μm
Dopant		N-type (Nitrogen)	N-type (Nitrogen)
Primary Flat Length		32.5 ± 2.0 mm	47.5±2.0 mm
Secondary Flat Length		18.0 ± 2.0 mm	37.5 ±2.0 mm
Surface Orientation		4.0° toward [11-20] ± 0.5°	4.0° toward [11-20] ± 0.5°
Primary Flat Orientation		[11-20] ± 5°	[11-20] ± 5°
Secondary Flat Orientation		90° Clockwise from Primary Flat ± 5° (Si face up)	90° Clockwise from Primary Flat ± 5° (Si face up)
Resistivity (ohm-cm)		0.010-0.030	0.010-0.030
Surface Roughness	Front Side	5 Å	5 Å
	Back Side	1 nm	1 nm
TTV		≦10μm	≦15μm
LTV (site 10x10 mm)		≦4μm	≦4μm
BOW		≦25μm	≦30μm
WARP		≦50μm	≦50μm
Bulk Characteristics			
	Crack	None	None
	Planar Defect	≦10% area	≦10 % area
	Inclusion	≦10% area	≦10 % area
	Foreign Polytype Area	≦10% area	≦10 % area
Surface Finish			
	Scratch	≦5 scratches	≦5 scratches
	Pits	≦10	≦10
	Particle	≦4	≦4

Specification of semi-insulating SiC wafer

100/150 mm SI-SiC Wafer Specification

Property		4 inch	6 inch
Diameter		100.0 ± 0.5 mm	150.0 ± 0.5 mm
Thickness (Center Point)		500 ± 25 μm	500 ± 25 μm
Dopant		None	None
Primary Flat Length		32.5 ± 2.0 mm	47.5±2.0 mm
Secondary Flat Length		18.0 ± 2.0 mm	
Surface Orientation		On-axis [0001] ± 0.5°	On-axis [0001] ± 0.5°
Primary Flat Orientation		[1010] ± 5°	[1010] ± 5°
Secondary Flat Orientation		90° Clockwise from Primary Flat ± 5° (Si face up)	
Resistivity (ohm-cm)		>10^5	>10^5
Surface Roughness	Front Side	5 Å	5 Å
	Back Side	1 nm	1 nm
TTV		≦10μm	≦15μm
LTV (site 10x10 mm)		≦4μm	≦4μm
BOW		≦25μm	≦30μm
WARP		≦50μm	≦50μm
Bulk Characteristics			
	Crack	None	None
	Planar Defect	≦10% area	≦10 % area
	Inclusion	≦10% area	≦10 % area
	Foreign Polytype Area	≦10% area	≦10 % area
Surface Finish			
	Scratch	≦5 scratches	≦5 scratches
	Pits	≦10	≦10
	Particle	≦4	≦4