

### Specification of 6inch 4H-SiC Substrate

Description	Specification
Material	4H-SiC Substrate
Wafer Orientation	The miscut of the 4H-SiC is $4 \pm 0.5$ degree off-axis toward $\langle 1120 \rangle$ , $0 \pm 0.5$ degree off-axis toward $\langle 0001 \rangle$ .
Conduction Type	N-Type/Si Surface (CMP)
Effective Area	$\geq 90\%$
Micropipe Density	$\leq 5/\text{cm}^2$ (Production Grade)
Electrical Resistivity	N-Type: $0.015 \sim 0.028 \Omega \cdot \text{cm}$ , Si: $\geq 1 \times 10^5 \Omega \cdot \text{cm}$
Carrier Density	$\geq 1 \times 10^{12} \text{ cm}^{-2}$
Diameter	6inch
Thickness	$500 \pm 25 \mu\text{m}$
Flat length	$47.5 \pm 1 \text{ mm}$
Surface Roughness (Ra)	$\text{Ra} \leq 0.3 \text{ nm}$
Back Surface Roughness	Double sided polishing
Substrate Parallelism	$\leq 20 \mu\text{m}$
TTV	$\leq 20 \mu\text{m}$
BOW	$-25 \sim 25 \mu\text{m}$
Warp	$\leq 35 \mu\text{m}$
Scratch	None
Defective Patterns	Total defective area $\leq 5\%$ of wafer area; Inspection by naked eye added without bright light
Laser Marking	None
Packaging	Clean room, vacuum packing

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