4英寸N型4H-SiC衬底标准

4 inch N-type 4H Silicon Carbide Substrate Specifications

等级 **Grade**	产品级 **Production Grade**	研究级 **Research Grade**
直径 Diameter	100.0 mm＋0.0/-0.5 mm	
厚度 Thickness	350.0 μm ± 25.0 μm	
掺杂 Dopant	nitrogen	
表面取向 Surface Orientation	4 °toward<11-20>± 0.5°	
主定位边晶向 Primary Flat Orientation	<11-20> ± 5.0°	
次定位边晶向 Secondary Flat Orientation	90.0° CW from primary ± 5.0°, silicon face up	
主定位边长度 Primary Flat Length	32.5 mm ±2.0 mm	
次定位边长度 Secondary Flat Length	18.0 mm ±2.0 mm	
微管密度 Micropipe Density	≤0.1/ cm^2	≤1 / cm^2
电阻率 Resistivity	0.015-0.025 Ω·cm 垂直结构做电极	
总厚度变化 TTV	≤3 μm	
弯曲度 Bow（absolute value）	≤10 μm	
翘曲度 Warp	≤15 μm	
局域厚度变化 LTV（max, 1cm^2 区域）	≤2 μm	
表面抛光 Surface Finish	Double side polish, Si epi-face CMP, C face optical polish	
表面粗糙度 Surface Roughness	CMP Si Face Ra≤0.15 nm	
多型（偏振光观测） Polytype Area by polarized light	None permitted	
裂纹（强光灯观测） Cracks by high-intensity light	None permitted	
划痕（强光灯观测） Scratches by high-intensity light	None permitted	
崩边 Edge chips	None permitted	Qty.2 ≤1.0 mm width and depth
表面污染物（强光灯观测） Area Contamination by high-intensity light	None permitted	
包装 Packaging	Multi-wafer Cassette or Single Wafer Container	

* Dummy grade wafers can be prepared according to customer requirements.

* all rights reserved © Guangzhou Summit Crystal Semiconductor Co., Ltd

地址：广州市南沙区珠江街南江二路 7 号
电话：020-39089227
邮箱：sales@summitcrystal.com

6 英寸 N 型 4H-SiC 衬底标准

6 inch N-type 4H Silicon Carbide Substrate Specifications

等级 **Grade**	产品级 **Production Grade**	研究级 **Research Grade**
直径 Diameter	150.0 mm±0.25 mm	
厚度 Thickness	350.0 μm ± 25.0 μm	
掺杂 Dopant	nitrogen	
表面取向 Surface Orientation	4 ˚toward<11-20>± 0.5˚	
主定位边晶向 Primary Flat Orientation	<11-20> ± 5.0˚	
主定位边长度 Primary Flat Length	47.5 mm ±2.0 mm	
次定位边长度 Secondary Flat Length	None	
微管密度 Micropipe Density	≤0.1/ cm^2	≤1 / cm^2
总位错密度 EPD	≤8000/cm^2	≤10000/cm^2
基平面位错密度 BPD	≤2000/cm^2	≤3000/cm^2
刃位错密度 TED	≤6000/cm^2	≤7000/cm^2
螺位错密度 TSD	≤500/cm^2	≤1000/cm^2
电阻率 Resistivity	0.015-0.025 Ω·cm	
总厚度变化 TTV	≤5 μm	
弯曲度 Bow（absolute value）	≤15 μm	
翘曲度 Warp	≤30 μm	
局域厚度变化 LTV（average, 1cm^2 区域）	≤2 μm	
表面抛光 Surface Finish	Double side polish, Si epi-face CMP, C face optical polish	
表面粗糙度 Surface Roughness	CMP Si Face Ra≤0.15 nm	
多型（偏振光观测） Polytype Area by polarized light	None permitted	
裂纹（强光灯观测） Cracks by high-intensity light	None permitted	
划痕（强光灯观测） Scratches by high-intensity light	None permitted	
崩边 Edge chips	None permitted	Qty.2 ≤1.0 mm width and depth
表面污染物（强光灯观测） Area Contamination by high-intensity light	None permitted	
包装 Packaging	Multi-wafer Cassette or Single Wafer Container	

* Dummy grade wafers can be prepared according to customer requirements.

* all rights reserved © Guangzhou Summit Crystal Semiconductor Co., Ltd

地址：广州市南沙区珠江街南江二路 7 号
电话：020-39089227
邮箱：sales@summitcrystal.com