

# High Purity Semi-Insulating SiC 4" wafer



4Inch Silicon Carbide Substrate Specification				
Property	Production Grade+	Production Grade	Research Grade	Dummy Grade
Diameter	100.0 mm ± 0.25 mm			
Surface Orientation	<0001> ± 0.2°			
Primary Flat Orientation	{10-10} ± 5.0°			
Secondary Flat Orientation	90.0° CW from orientation flat ± 5° , silicon face up			
Primary Flat Length	32.5 mm ± 2.0 mm			
Secondary Flat Length	18.0 mm ± 2.0 mm			
Micropipe Densities	≤ 1 cm <sup>-2</sup>	≤ 5 cm <sup>-2</sup>	≤ 10 cm <sup>-2</sup>	≤ 50 cm <sup>-2</sup>
Resistivity	≥ 1E7 Ω-cm			( area 75% ) ≥ 1E7 Ω-cm
Thickness	350.0 μm ± 25.0 μm or 500.0 μm ± 25.0 μm			
TTV	≤ 10 μm			≤ 15 μm
Bow	≤ 25 μm			≤ 30 μm
Warp	≤ 45 μm			
Surface Roughness	CMP Si Face Ra < 0.5 nm (10 μm × 10 μm)			N/A
Edge Chips/Indents by Diffuse Lighting	None permitted		Qty.2 < 1.0mm width & depth	