

SILICON CARBIDE (SiC) SUBSTRATE SPECIFICATION
150mm DIAMETER, 4H POLYTYPE, SEMI-INSULATING
Prime Grade

Property	Value	Tolerance	Units
Diameter	150.0	± 0.2	mm
Edge Exclusion	3		mm
Center Thickness	500 µm	± 25	µm
Polytype	4H	> 95% of area	
Micropipe Density	< = 30		cm ⁻²
Face Orientation	C-plane (0001); on-axis	± 0.5	deg
Front Surface (Si-face) Finish	EpiReady™ ⁽¹⁾		
Scratches by Bright Light	Cumulative Length < 10 cm		
Back Surface (C-face) Finish	Optical Polish (standard)		
Warp	< = 60		µm
Bow	< = 40		µm
TTV	< = 15		µm
LTV (10mm x 10mm – Avg)	< = 3.0		µm
Orientation Notch	[1-100] direction	± 2	deg
Orientation Notch Depth	1.0	+0.25 -0.0	mm
Laser Mark Location & Text	Carbon Face – Offset to Left when viewing C-face Per SEMI Specs (draft)		
Edge	Beveled, conforming to SEMI edge specs		
Packaging	Single wafer container or Multi-Wafer Cassette		
Cracks	None		
Cumulative Area Defects	< 10% Area		
Dopant	SI Vanadium Doped ($\rho > 1.0E7$)		Ohm*cm

⁽¹⁾ EpiReady™ CMP polish is suitable for GaN or SiC epitaxial growth