



**Wide Bandgap Materials Group**

20 Chapin Road, Suite 1005  
 PO Box 840  
 Pine Brook, NJ 07058  
 TEL: (973) 227- 1551  
 FAX: (973) 227- 8658

**SILICON CARBIDE (SiC) SUBSTRATE SPECIFICATION  
 3 INCH (76.2mm) DIAMETER, 6H POLYTYPE, ON-AXIS ORIENTATION  
 DEVELOPMENT GRADE**

<b>Property</b>	<b>Value</b>	<b>Tolerance</b>	<b>Units</b>
Diameter	76.2	± 0.5	mm
Edge Exclusion	2		mm
Center Thickness	400 µm or Customer Specification	± 30	µm
Polytype	6H polytype	>90% of area	
Micropipe Density			
n-type	< 200		cm <sup>-2</sup>
Semi-Insulating	< 200		cm <sup>-2</sup>
Face Orientation	c-plane (0001); on-axis	± 2	deg
Front Surface (Si-face): Finish <sup>[1]</sup>	Epiready™ <sup>[1]</sup>		
Scratches by Bright Light	Cumulative Length < 7cm		
Back Surface (C-face): Finish	Customer Specified Fine Ground Standard		
Bow	< 25		µm
Primary Flat Orientation	Perpendicular to (11-20) plane	± 1	deg
Secondary Flat Orientation	90° CW from primary flat	± 5	deg
Carbon Face Laser Mark Location & Text	Per customer specification		
Edge	Beveled or Rounded		
Packaging	Single wafer Fluoroware™ container		
Cracks	None		
Cumulative Area Defects	< 30% Area		
Dopant	n-type Nitrogen SI Vanadium Doped		

<sup>[1]</sup> Epiready™ polish is suitable for GaN epitaxial growth