



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
 Prime Grade**

| Property | Value | Tolerance | Units |
|---|--|------------------|------------------|
| Diameter | 76.2 | ± 0.5 | mm |
| Edge Exclusion | 2 | | mm |
| Center Thickness | 400 µm or Customer Specification | ± 30 | µm |
| Polytype | 6H polytype | >95% of area | |
| Micropipe Density | | | |
| n-type | < 100 | | cm ⁻² |
| Semi-Insulating | < 100 | | cm ⁻² |
| Face Orientation | c-plane (0001); on-axis | ± 0.5 | deg |
| Front Surface (Si-face): Finish ^[1] | Epiready™ ^[1] | | |
| 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 | < 10% Area | | |
| Dopant | n-type Nitrogen SI Vanadium Doped | | |

^[1] Epiready™ CMP polish is suitable for GaN epitaxial growth