



4" (100mm) AlGaIn/GaN HEMT Epi Wafer Specifications

HEMT on SiC (GaN cap)

| Property | Measurement | Value | Unit | Uniformity |
|---------------------------------------|------------------------|----------|----------------------|------------|
| <i>*2DEG Mobility</i> | Contactless Hall | >2000 | cm ² /V.s | < %3 |
| <i>*Sheet Charge Density</i> | Contactless Hall | >1,0E+13 | cm ⁻² | < %3 |
| <i>**Sheet Resistance</i> | Contactless Hall | < 325 | Ohms/Sq | < %3 |
| <i>AlGaIn Barrier Al% Composition</i> | PL | 25-27 | % | < %3 |
| <i>AlGaIn Barrier Thickness</i> | XRD Fit | 18-25 | nm | NA |
| <i>GaN Cap Thickness</i> | XRD Fit | 2.0-3.0 | nm | NA |
| <i>Total Film Thickness</i> | White Light Reflection | 1.5-2.0 | μm | < %3 |
| <i>Final Bow</i> | In-situ Laser | <30 | μm | NA |

- Substrate: 4H-6H Semi Insulating SiC, 100mm dia., 500μm thick.
- Buffer: Iron/Carbon doped
- Edge Exclusion: 3mm
- * Average of 18 point measurement
- ** Average of 55 point measurement