



□ Compounds

Gallium Arsenide (GaAs) / Indium Arsenide (InAs) / Gallium Antimonide (GaSb) / Indium Antimonide (InSb) / Indium Phosphide (InP) / Silicon Carbide (SiC) / Gallium Nitride (GaN) / Sapphire Wafer & Ingot (Al₂O₃) / Cadmium Sulfide (CdS) / Cadmium Telluride (CdTe) / Cadmium Zinc Telluride (CZT)

↘ Gallium Arsenide (GaAs) Substrate

Gallium Arsenide (GaAs) Substrate is formed by high purity Gallium and Arsenic elements and grown by Vertical Gradient Freeze (VGF) growing method and is widely being used for LED or LD application in Microelectronic or Optoelectronic industries. 2" 3" 4" and 6" are available.



| No. | Items | Standard Specifications | | | |
|-----|---|--|------------|------------|------------|
| 1 | Size | 2" | 3" | 4" | 6" |
| 2 | Diameter mm | 50.8±0.3 | 76.2±0.3 | 100±0.5 | 150±0.5 |
| 3 | Growth Method | VGF | VGF | VGF | VGF |
| 4 | Conductivity Type | SC/P(Zn-doped), SC/N(Si-doped), Semi-insulating | | | |
| 5 | Orientation | (100)±0.5° | (100)±0.5° | (100)±0.5° | (100)±0.5° |
| 6 | Thickness μm | 350±25 | 625±25 | 625±25 | 650±25 |
| 7 | Orientation Flat mm | 17±1 | 22±1 | 32±1 | Notch |
| 8 | Identification Flat mm | 7±1 | 12±1 | 18±1 | - |
| 9 | Resistivity Ω-cm | (1-9)E3 for P or N, (1-10)E8 for Semi-Insulating | | | |
| 10 | Mobility cm ² /v.s | 50-120 for P, (1-2.5)E3 for N; ≥4000 for Semi-Insulating | | | |
| 11 | Carrier Concentration cm ⁻³ | (5-50)E18 for P; (0.8-4)E18 for N | | | |
| 12 | TTV μm max | 10 | 10 | 10 | 10 |
| 13 | Bow μm max | 30 | 30 | 30 | 30 |
| 14 | Warp μm max | 30 | 30 | 30 | 30 |
| 15 | EPD cm ⁻² | 5000 | 5000 | 5000 | 5000 |
| 16 | Surface Finish | P/E, P/P | P/E, P/P | P/E, P/P | P/E, P/P |
| 17 | Packing | Single wafer container sealed in Aluminum bag. | | | |
| 18 | Mechanical Grade GaAs wafer regardless of electronic specifications also available. | | | | |