

Crystalline β -Ga₂O₃ is a wide bandgap semiconductor (4.8-4.9 eV) which exhibits a high breakdown field of 8 MV/cm, high dielectric constant of 10 and electron mobility of 67 cm²/V-s. This translates to a high voltage Baliga figure of merit (HV-FOM) that is more than 3000X that of Si, more than 8X that of 4H-SiC, and more than 4X that of GaN. Furthermore, the high frequency Baliga figure of merit (HF-FOM) is ~150X that of Si, ~3X that of 4H-SiC, and 50% greater than that of GaN.

Key Advantages

- Potential for deep ultraviolet (UV) photodetectors, high power & high voltage devices
- Growth rates of 5 μ m/hr & suitable for mass production

Orientation: Epi-layer matches substrate for
 β -Ga₂O₃ (-201) & (010)

Conduction Type: N-type

Resistivity: < 0.05 Ohm-cm

Front Surface Finish: RMS <2nm

Edge Exclusion: 3mm

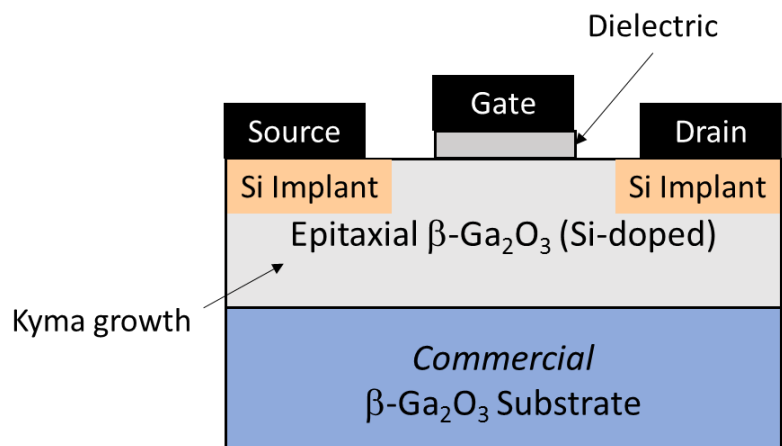
Epi-growth available on below substrates:

- β -Ga₂O₃
- GaN
- AlN
- AlN/Si
- Sapphire

Available Thickness Range: 50(\pm 5) nm—30(\pm 3) μ m

Carrier Concentration: $\sim 1 \times 10^{18}/\text{cm}^3$

Power Transistor Example



Contact us for more information