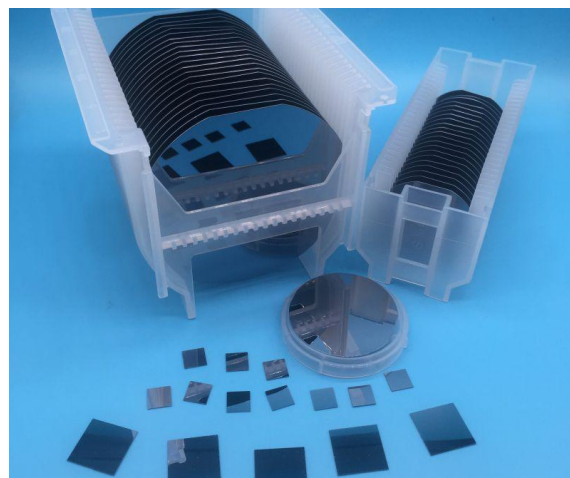


Germanium (Ge)

Germanium has good semiconductor properties. High-purity germanium is doped with trivalent elements (such as indium, gallium, boron) to obtain P-type germanium semiconductors, and pentavalent elements (such as antimony, arsenic, and phosphorus) are doped to obtain N-type germanium semiconductors. They have high electron mobility and high hole mobility.

The high-quality Ge substrates can be used in concentrated photovoltaic(CPV), outer-space solar-cell panel and high-bright light-emitting diode(LED) applications.



PARAMETERS

Growth Method	Czochralski		
Crystal Structure	Cubic		
Lattice Constant	a=5.65754 Å		
Density	5.323(g/cm ³)		
Melt Point	937.4°C		
Doping Element	no	Sb	Ga
Type	/	N	P
Resistivity	> 35Ωcm	0.01~35 Ωcm	0.05~35 Ωcm
EPD	< 4×10 ³ /cm ²	< 4×10 ³ /cm ²	< 4×10 ³ /cm ²
Dimension	10x3mm, 10x5mm, 10x10mm, 15x15mm, 20x15mm, 20x20mm, Dia50.8 mm ,dia76.2mm, Dia100 mm		
Thickness	0.5mm, 1.0mm		
Polishing	One side or two sides		
Orientation	<100>、<110>、<111>、±0.5°		
Crystal Plane Orientation Accuracy	±0.5°		
Edge Orientation Accuracy	2° (Special requirements can reach within 1°)		
Bevel Wafer	According to specific requirements, wafers with edge-oriented crystal planes inclined at a specific angle (inclination angle 1°-45°) can be processed.		
Surface Roughness	Ra≤5Å (5×5μm)		
Package	Class 100 clean bag, Class 1000 super clean room		