

# Ge Substrate

Germanium (Ge) is an important semiconductor substrate material with excellent performance characteristics including electron mobility and hole mobility. Ge substrates are used for Concentrated Photovoltaic cells (CPV), Space solar cells and ultra-high brightness LEDs.

Vital Materials provides Ge substrates with Low EPD or Zero EPD from 2" to 6" . Substrates with non-standard thicknesses and wafer orientations are also available upon request.

Unit		Semiconductor Specifications	
Crystal Growth Method		CZ / VGF	
Conduct Type		n-type	p-type
Dopant		Sb	Ga
Dimension	inch	2", 3", 4" and 6"	2", 3", 4" and 6"
Wafer Orientation*		(100) $\pm 0.5^\circ$	(100) $\pm 0.5^\circ$
OF/IF		US, EJ	US, EJ
Resistivity (at RT)	ohm. cm	0.002-40	0.002-0.005
Etch Pit Density (EPD)	/cm <sup>2</sup>	-	0
Laser Marking		Upon request	
Thickness*	$\mu\text{m}$	(175-500) $\pm 25$	
TTV	$\mu\text{m}$	$\leq 15$	$\leq 15$
Warp	$\mu\text{m}$	$\leq 25$	$\leq 25$
Surface	Side1 Side2	Polished Etched/Grinding	Polished Etched/Grinding
Epi-ready		Yes	
Package		Cassette or single wafer container	

\* Wafer Orientation and Thickness are available upon request



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