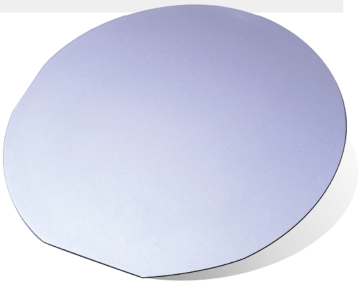
InP Substrate

Vital Materials provides high quality Indium Phosphide (InP) wafers as a key semiconductor material used in the fields of telecommunications and microelectronics. InP can operate at high powers and temperatures. InP is used in Optical Fiber Communication, Wireless Network (WLAN), Mobile Handsets, Blue Tooth Communication, Satellite Communications, Monolithic Microwave Integrated Circuit (MMIC), as well as Radio Frequency Integrated Circuit (RFIC).

Vital Materials produces 2” to 4” InP substrates, including semi-insulating (Fe-doped) and semiconducting (S or Zn doped) substrates. Low EPD substrates for specialty applications are also available. Substrates with non-standard thicknesses and wafer orientations are also available upon request.

	Unit	Semi-insulating Specifications	Semi-conduct Specifications		
Conduct Type		-	n-type	n-type	p-type
Crystal Growth Method		VGF	VGF		
Dopant		Fe	S, Sn	Undoped	Zn
Dimension	inch	2″, 3″, 4″	2″, 3″, 4″		
Wafer Orientation*		(100) ±0.5°	(100) ±0.5°		
OF/IF		US, EJ	US, EJ		
Carrier Concentration	cm^{-3}	-	$(0.8-8)\times10^{18}$	$(1-10)\times10^{15}$	$(0.8-8)\times10^{18}$
Resistivity (at RT)	ohm.cm	$\geq0.5\times10^{7}$	-	-	-
Mobility	$cm^2/v.s$	≥1000	1000-2500	3000-5000	50-100
Etch Pit Density(EPD)	$/cm^2$	≤5000	≤5000	≤5000	≤500
Laser Marking		Upon request	Upon request		
Thickness*	μm	(350-675) ±25	(350-675) ±25		
TTV(P/P)	μm	≤10	≤10		
TTV(P/E)	μm	≤15	≤15		
Warp	μm	≤15	≤15		
Surface	Side1 Side2	Polished Polished/Etched	Polished Polished/Etched		
Epi-ready		Yes	Yes		
Package		Cassette or single wafer container	Cassette or single wafer container		

* Wafer Orientation and Thickness are available upon request



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