

GaP

Single Crystal Substrates

GaP single crystals are grown by the LEC technique using 6 N high purity materials and are widely used for red, yellow and green LED substrates. MTI provides high quality as-cut GaP wafers for LPE in mass production, and also supplies epi polished wafers for CVD and MBE applications.

Typical Physical Properties		
Crystal Structure	Cubic. a =5.4505 Å	
Growth Method	CZ (LEC)	
Density	4.13 g/cm ³	
Melt Point	1480 °C	
Thermal Expansion	5.3 x10 ⁻⁶ / °C	
Dopant	S doped	undoped
Crystal growth axis	<111> or <100>	<100> or <111>
Conducting Type	N	N
Carrier Concentration	2 ~ 8 x10 ¹⁷ /cm ³	4 ~ 6 x10 ¹⁶ /cm ³
Resistivity	~ 0.03 Ω-cm	~ 0.3 Ω-cm
EPD	< 3x10 ⁵	< 3x10 ⁵
Standard Products		
As - grown boule <111>or <100> .± 0.5°	2" dia. x 50 ~ 70 mm length	
As cut blank <111>or <100> .± 0.5°	2" dia. x 0.5 mm 2" dia x 0.35 mm	
Epi -polished substrates <111>or <100> .± 0.5° 1 or 2 sides polished, Ra< 8 Å	2" dia. x 0.43 mm 2" dia x 0.35 mm	

Special size and orientation is available upon request

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