

Indium Phosphide

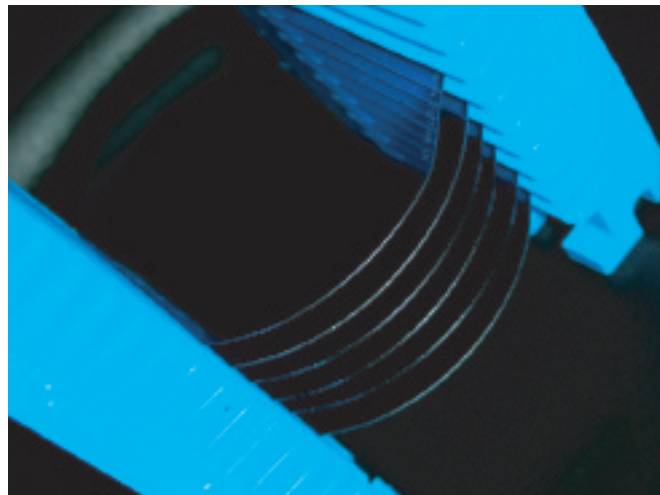
Epitaxy Ready Polished Wafers



Wafer Technology offers single crystals that are grown in a pure fused silica system by the Czochralski method from multiple zone refined polycrystalline ingot.

Mechanical Specifications

Indium phosphide can be supplied as ingot sections or as-cut, etched or polished wafers. All Indium Phosphide wafers are individually laser scribed with ingot and slice identity to ensure perfect traceability.



WAFER SPECIFICATIONS

	2" diameter slices	3" diameter slices
Orientation	(100) $\pm 0.1^\circ$	(100) $\pm 0.1^\circ$
	Misorientations up to 10° in any direction are available. For other orientations and directions please ask.	
Diameter	50.5 \pm 0.4mm	76.2 \pm 0.4mm
Flat Option	EJ	EJ
Flat orientation tolerance	$\pm 0.1^\circ$	$\pm 0.1^\circ$
	Wafers can also be supplied with either the major or minor flat prepared to an orientation tolerance of 0.02°	
Major flat length	16 \pm 2mm	22 \pm 2mm
Minor flat length	8 \pm 1mm	11 \pm 1mm
Thickness	350 \pm 25 μ m or 500 \pm 25 μ m	625 \pm 25 μ m or 635 \pm 25 μ m
Lasermark	Back surface parallel to the major flat	

Packaging

Polished Wafers

Fluoroware type tray, individually sealed in two outer bags in inert atmosphere.

As-cut Wafers

Fluoroware type tray or glassine bag.

'Process Trial' wafers

Fluoroware type tray, individually sealed in one outer bag.

If you do not see the specification you require, please ask for details.

ELECTRONIC AND CRYSTALLOGRAPHIC SPECIFICATIONS

Dopant	Type	Carrier Concentration cm ⁻³	Mobility cm ⁻² V ⁻¹ s ⁻¹	E.P.D. cm ⁻²
Undoped	n-type	$\leq 10^{16}$	≥ 4200	2": $\leq 1 \times 10^5$ 3": $\leq 2 \times 10^5$
Iron	n-type	Semi-insulating	≥ 1000	2": Grade 1 $\leq 5 \times 10^4$ 2": Grade 2 $\leq 2 \times 10^5$ 3": $\leq 2 \times 10^5$
Tin	n-type	$(7-40) \times 10^{17}$	2500-750	2": $\leq 6 \times 10^4$ 3": $\leq 2 \times 10^5$
Sulphur	n-type	2" $(3-10) \times 10^{18}$ 3" $(3-15) \times 10^{18}$	2" 2000-1000 3" 2000-500	2": ≤ 1000 3": $\leq 2 \times 10^5$
Zinc	p-type	$(1-6) \times 10^{18}$	Not specified	2": $\leq 1 \times 10^4$
Low Zinc	p-type	$(1-6) \times 10^{17}$	Not specified	2": $\leq 6 \times 10^4$

Tighter electrical ranges are available on request.



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