



150 mm SI LEC GaAs



Freiberger

Parameter		Unit	Values
Diameter		mm	150.0 ± 0.1
Crystal growth method			LEC
Option A			
Resistivity* ¹		Ωcm	(1.0 ... 6.0) × 10 ⁷
Hall mobility		cm ² /Vs	(8.5 ... 7.0) × 10 ³
Carbon content		cm ⁻³	(0.3 ... 4.0) × 10 ¹⁵
Option B			
Resistivity* ¹		Ωcm	(0.6 ... 4.0) × 10 ⁸
Hall mobility		cm ² /Vs	(7.0 ... 4.5) × 10 ³
Carbon content		cm ⁻³	(2.0 ... 10.0) × 10 ¹⁵
Etch pit density* ²	avg. value on wafer	cm ⁻²	≤ 100 000
EL2 concentration	avg. value on wafer	cm ⁻³	(1.2 ... 1.7) × 10 ¹⁶
(100)-orientation	on off towards (110)* ³	° °	± 0.5 2.0 ± 0.5
Notch	orientation angle depth	° mm	[010] ± 2° 90 +5/-1 1.00 +0.25/-0.00
Thickness* ³		μm	675 ± 25
Total thickness variation (TTV)		μm	≤ 6
Total indicated reading (TIR)		μm	≤ 5
Local focal plane deviation (LFPD _{max})		μm	≤ 1.5
Local thickness variation (LTV _{max})		μm	≤ 1.8
Measurement site size		mm	20 × 20
Warp		μm	≤ 8
Particles	diameter > 0.3 μm	pcs.	≤ 100
Front side treatment			polished
Back side treatment			polished
Laser marking			acc. SEMI M 12
Packaging			cassette

*¹ measured @ 22 °C

*² measured according to DIN 50454-1: measurement at 9 sites

*³ other values upon request