



125 mm SI VGF GaAs



Freiberger

Parameter		Unit	Values
Diameter		mm	125.0 ± 0.1
Crystal growth method			VGF
Resistivity * ¹		Ωcm	(0.8 ... 8.0) × 10 ⁸
Hall mobility		cm ² /Vs	(7.5 ... 4.0) × 10 ³
Carbon content		cm ⁻³	(1.0 ... 10.0) × 10 ¹⁵
Etch pit density * ²	avg. value on wafer	cm ⁻²	≤ 10 000
EL2 concentration	avg. value on wafer	cm ⁻³	(1.0 ... 1.5) × 10 ¹⁶
(100)-orientation	on	°	± 0.5
	off towards (110) * ³	°	2.0 ± 0.5
Orientation (OF) flat	length	mm	42.5 ± 2.5
SEMI-US	orientation		[011] ± 1°
SEMI-EJ	orientation		[011] ± 1°
Identification (IF) flat	length	mm	27.5 ± 2.0
SEMI-US	orientation		[011] ± 5°
SEMI-EJ	orientation		[011] ± 5°
Thickness * ³		μm	625 ± 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	15 × 15
Warp		μm	≤ 8
Particles	diameter > 0.3 μm	pcs.	≤ 80
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: whole wafer mapping, site size 500 x 500 μm²
number of sites 43984, edge exclusion 3 mm

*³ other values upon request