

Specification

150 mm SiC Epitaxial Wafer

Version 3.0

Items	N-type Specification
Diameter	150 mm
Poly-type	4H
Surface	(0001) Silicon-face
Off-orientation toward [11-20]	4±0.5°
Conductivity	n-type
Dopant	Nitrogen
Carrier Concentration	1E14 - 1E19 cm ⁻³
C.C. Tolerance	±12%
C.C. Uniformity(% s/μ)	≤5%
Epi Thickness	0.5-200 μm
Epi Tolerance	±5%
Epi Uniformity(% s/μ)	≤2%
Usable area (2mmx2mm) EE=3mm	≥95%
Surface Roughness 10 μm x 10 μm area.	≤0.5 nm
Scratches	Scratches (Max 5) cumulative length <1 x wafer diameter
Edge chip	None permitted above 0.5 mm in size

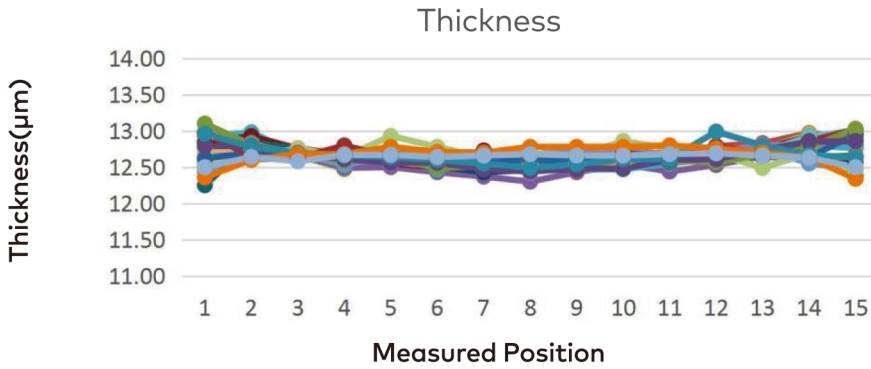
Notes:

N-type epi layers ≤30 microns are preceded by an n-type, 1E18 cm⁻³, 0.5-1 μm buffer layer.

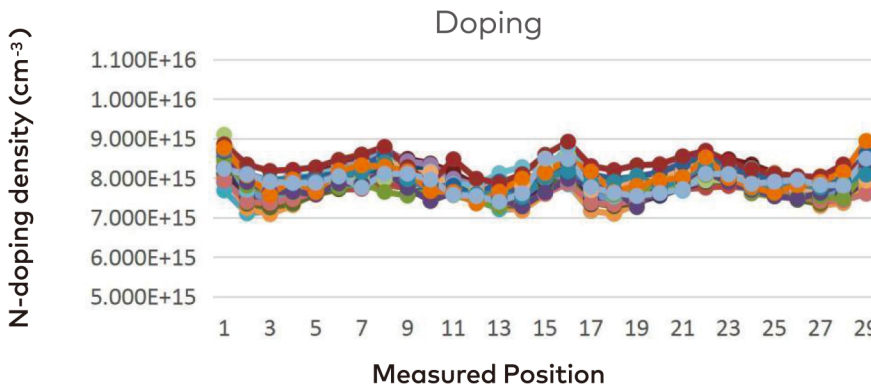
Carrier Concentration is determined as an average value across the wafer using Hg probe CV.

Epi Thickness is determined as an average value across the wafer using FTIR.

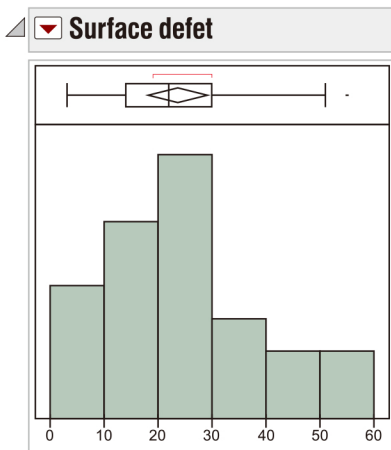
Data showing 25 pcs of 150mm epi-wafers using same Process



Mean(μm)	12.662
Sigma/Mean	0.29 %
(max-min)/(max+min)	0.67 %



Mean (cm ⁻³)	7.888E+15
Sigma/Mean	2.23 %
(max-min)/(max+min)	4.40 %



Quantiles

100.0%	maximum	55
99.5%		55
97.5%		55
90.0%		46.8
75.0%	quartile	30
50.0%	median	22
25.0%	quartile	14
10.0%		5.6
2.5%		3
0.5%		3
0.0%	minimum	3

Summary Statistics

Mean	23.6
Std Dev	13.690021
Std Err Mean	2.7380041
Upper 95% Mean	29.250963
Lower 95% Mean	17.949037
N	25

Note:

For ultra high thickness above 30 μm or any special epitaxy requests, please contact our Sales, local representatives or via enquiry@sicty.com