



TAISIC MATERIALS CORP.

盛新材料科技股份有限公司

Taisic Materials Corp.

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150mm N type substrate	Prime (優選級)	Production (產品級)	Research (研究級)	Dummy (樣品級)
Type	N-type SiC	N-type SiC	N-type SiC	N-type SiC
Material type	SiC-N Conductive	SiC-N Conductive	SiC-N Conductive	SiC-N Conductive
Diameter	150 ± 0.25 mm	150 ± 0.25 mm	150 ± 0.25 mm	150 ± 0.25 mm
Thickness(off-axis)	350 ± 25um	350 ± 25um	350 ± 25um	350 ± 25um
Dopant	N	N	N	N
Resistivity (Ohm-cm)	0.015~0.025	0.015~0.025	0.015~0.025	0.015~0.025
Surface orientation	4.0° toward[11-20], ± 0.5°	4.0° toward[11-20], ± 0.5°	4.0° toward[11-20], ± 0.5°	4.0° toward[11-20], ± 0.5°
Si-face	CMP	CMP	CMP	CMP
C-face	Polished	Polished	Polished	Polished
Primary flat length	47.5mm ± 1.5mm	47.5mm ± 1.5mm	47.5mm ± 1.5mm	47.5mm ± 1.5mm
Primary flat orientation	[11-20] ±5°	[11-20] ±5°	[11-20] ±5°	[11-20] ±5°
TTV	≤ 10 um	≤ 10 um	≤ 10 um	≤ 15 um
LTV(10 X 10mm) (LTV_Avg)	≤ 2 um	≤ 2 um	≤ 4 um	≤ 5 um
Warp	≤ 40 um	≤ 40 um	≤ 40um	≤ 70um
Bow (±)	≤ 25 um	≤ 25 um	≤ 30um	≤ 60um
Crack by high intensity light	None permitted	None permitted	None permitted	None permitted
Striations by high intensity light	None permitted	None permitted	3 allowed ≤ 3mm each	10 allowed ≤ 10mm each
Scratch by optical surface inspection	≤ 5 scratches and Cumulative length ≤ 100 mm	≤ 5 scratches and Cumulative length ≤ 150 mm	≤ 5 scratches and Cumulative length ≤ 150 mm	≤ 10 scratches and Cumulative length ≤ 200 mm
Edge exclusion area	3mm	3mm	3mm	3mm
Micropipe Density (pcs/cm2)	≤ 0.5cm-2 for 100% of the wafers	≤ 1cm-2 for 100% of the wafers	≤ 5cm-2 for 100% of the wafers	≤ 10cm-2 for 100% of the wafers
BPD (pcs/cm2)	≤ 1500	N/A	N/A	N/A
Chipping at the wafer edge	None permitted ≥ 0.5mm width and depth	None permitted ≥ 0.5mm width and depth	Max. 2 pcs ≤ 1mm width and depth	Max. 5 pcs ≤ 5mm width and depth
Total usable area* Quantitative by automated optical surface inspection and 2mmx2mm site map	≥ 95% area	≥ 90% area	≥ 70% area	≥ 50% area
Polytype areas by diffuse lighting	≤ 1%	≤ 5%	≤ 5%	≤ 10%
HEX plates by high intensity light	None permitted	None permitted	None permitted	≤ 10%
Contamination (stains/discolored/mottled/cloudy) by high intensity light	None permitted	None permitted	None permitted	≤ 10%