

PRODUCT SPECIFICATION					
LARGAN TAC 大立光電集團 台灣應用晶體股份有限公司		Item		8-inch N-Type SiC Substrate	Document Revision: Aug-2026
		COO		TAIWAN	
		Manufacturer		TAIWAN APPLIED CRYSTAL CO., LTD.	
		Head Office Address		Rm. 104, No. 210, Industrial Park 38th Rd., Xitun Dist., Taichung City 407277, Taiwan (R.O.C.)	
		Factory Address		No. 23, Industrial Park 19th Rd., Nantun Dist., Taichung City 408019, Taiwan (R.O.C.)	
No.	Product Performance	Unit	Grade		
			UP	P-SBD	Dummy
1	Crystal Growth Method	N/A	PVT		
2	Crystal Form	N/A	4H		
3	Dopant	N/A	Nitrogen		
4	Diameter	(mm)	200±0.2		
5	Thickness	(μm)	500±25		
6	Notch Angle	(°)	90+5/-1		
7	Notch Orientation	(°)	[1-100]±5°		
8	Notch Depth	mm	1~1.25		
9	Surface Orientation	(°)	4.0° toward [11-20]±0.25°		
10	Orthogonal Misorientation	(°)	±5.0		
11	LTV max (10mm*10mm, Edge exclusion 3mm)	(μm)	≤3	≤3	≤10
12	TTV	(μm)	≤5	≤6	≤20
13	Bow	(μm)	-20~5	-20~20	-20~20
14	Warp	(μm)	≤35	≤35	N/A
15	Surface roughness (Si-face / AFM 10μm*10μm / 5 Sites)	(nm)	≤0.5	≤0.5	≤0.5
16	Surface roughness (C-face / AFM 10μm*10μm / 5 Sites)	(nm)	≤3	≤3	≤3
17	Resistivity	(Ohm-cm)	0.015~0.025	0.015~0.025	0.010~0.030
18	BPD	(ea/cm ²)	≤600	≤1000	≤3000
19	TED	(ea/cm ²)	≤2000	≤4000	≤8000
20	TSD	(ea/cm ²)	≤100	≤200	≤1000
21	MPD	(ea/cm ²)	≤0.1	≤0.1	≤1
22	Particle	(ea)	≤60 (Size≥0.3μm)	≤100 (Size≥0.3μm)	N/A
23	Scratches	(mm)	Total Length≤100	Total Length≤100	N/A
24	Basal Stacking fault density	%	≤0.3	≤1	N/A
25	TUA	%	≥98	≥96	N/A
26	Scratch count (Visual)	(ea)	≤0	≤0	N/A
27	Carbon inclusions (Visual)	%	≤0	≤0	N/A
28	Surface metal contamination (each) Pass/Fail (Ca, Cr, Cu, Fe, K, Ni, Zn, Ti, Co, Mn)	(atoms/cm ²)	≤5E10		
29	Hex plates		None	None	N/A
30	Pits		None	None	N/A
31	Pinholes		None	None	N/A
32	Polytype		None	None	None
33	Edge chip		None	None	N/A
34	Cracks		None	None	N/A
35	Contamination		None	None	N/A
36	Laser Marking		SEMI T5	SEMI T5	SEMI T5
37	Packaging Types		Vacuum	Vacuum	Vacuum