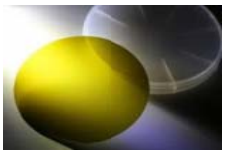
Silicon Carbide (SiC) Substrate



Silicon Carbide (SiC) Substrate, is grown by MOCVD method and being an outstanding new generation wide bandgap semiconductor with high thermal conductivity and breakdown field, high intrinsic temperature and radiation resistance too, therefore is widely applied for electric power transmission, LED display, new energy resources and Aeronautics & Astronautics industries. Conductivity of 4H/6H and industrial, lab dummy grades contained. 2" 3" 4" and 6" are available.

No.	Items		Standard Specifications			
1	Size		2"	3"	4"	6"
2	Diameter	mm	50.8±0.38	76.2±0.38	100±0.5	150±0.5
3	Growth Method		MOCVD	MOCVD	MOCVD	MOCVD
4	Conductivity Type		4H-N, 6H-N, 4H-SI, 6H-SI			
5	Resistivity	Ω-cm	0.015-0.028; 0.02-0.1; >1E5			
6	Orientation		0°±0.5°; 4.0° towards <1120>			
7	Thickness	μm	330±25	330±25	(350-500)±25	(350-500)±25
8	Primary Flat Location		<1-100>±5°	<1-100>±5°	<1-100>±5°	<1-100>±5°
9	Primary Flat Length	mm	16±1.7	22.2±3.2	32.5±2	47.5±2.5
10	Secondary Flat Location		Silicon face up: 90°, clockwise from prime flat ±5.0°			
11	Secondary Flat Length	mm	8±1.7	11.2±1.5	18±2	22±2.5
12	TTV	μm max	15	15	15	15
13	Bow	μm max	40	40	40	40
14	Warp	μm max	60	60	60	60
15	Edge Exclusion	mm max	1	2	3	3
16	Micropipe Density	cm^{-2}	<5, industrial; <15, lab; <50, dummy			
17	Dislocation	cm^{-2}	<3000, industrial; <20000, lab; <500000, dummy			
18	Surface Roughness	nm max	1(Polished), 0.5 (CMP)			
19	Cracks		None, for industrial grade			
20	Hexagonal Plates		None, for industrial grade			
21	Scratches		≤3mm, total length less than substrate diameter			
22	Edge Chips		None, for industrial grade			
23	Packing		Single wafer container sealed in Aluminum bag.			

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