



➤ Gallium Nitride (GaN) Substrate

Gallium Nitride (GaN) Substrate, grown by HVPE method on SiC or Sapphire (Al₂O₃) substrate, can be widely used for the fabrication of cutting-edge high speed and high capacity LED components. Circular wafer 2" and 4", square wafer 10x10 and 10x5 mm are all available.



No.	Items	Standard Specifications		
1	Shape	Circular	Circular	Square
2	Size	2"	4"	--
3	Diameter	mm	50.8±0.5	100±0.5
4	Side Length	mm	--	10x10 or 10x5
5	Growth Method		HVPE	HVPE
6	Orientation		C-plane (0001)	C-plane (0001)
7	Conductivity Type		N/(Si-doped or un-doped), Semi-insulating	
8	Resistivity	Ω-cm	<0.1, <0.05, >1E6	
9	Thickness	μm	350±25	350±25
10	TTV	μm max	15	15
11	Bow	μm max	20	20
12	EPD	cm ⁻²	<5E8	<5E8
13	Surface Finish		P/E, P/P	P/E, P/P
14	Surface Roughness		Front: ≤0.2nm, Back: 0.5-1.5μm or ≤0.2nm	
15	Packing		Single wafer container sealed in Aluminum bag.	

➤ Sapphire (Al₂O₃) Wafer / Ingot

Sapphire Aluminum Oxide Al₂O₃ Wafer / Ingot, 99.999% min, is a stable optical material which can be widely used in the fabrication of LED display devices, laser & optical windows or lens, as well as in other advanced power semiconductors industries. 2" 4" and 6" are available.



No.	Items	Standard Specifications		
1	Diameter	mm	50.8±0.05	100±0.1
2	Growth Method		HEM	HEM
3	Orientation		(C-A) or (C-M)	(C-A) or (C-M)
4	Primary Flat Location		A-axis ±0.2°	A-axis ±0.2°
5	Primary Flat Length	mm	16±0.5	30±0.5
6	Thickness	μm	430±10	650±20
7	TTV	μm max	5	10
8	Bow	μm max	5	10
9	Warp	μm max	8	15
10	Surface Finish		P/E	P/E
11	Surface Roughness	nm	<0.2 (epi-ready, for polished surface)	
12	Packing		In Nitrogen filled atmosphere vacuum bag.	
14	Remarks		Ingot/bulk up to 8" is also available upon request.	