

Product Introduction

Our GaN (Gallium Nitride) wafers are grown using the Hydride Vapor Phase Epitaxy (HVPE) method, available in semi-insulating (Fe-doped) and N-type (Ge-doped or undoped) variants with C-plane <0001> orientation. These freestanding GaN wafers feature low dislocation density (EPD as low as $1\sim9E5/cm^2$), sub-nanometer front surface roughness ($Ra \leq 0.2nm$), and tightly controlled TTV ($\leq 15\mu m$), bow, and warp ($\leq 20\mu m$), making them a high-quality, epi-ready substrate for demanding power and RF device applications.

Applications

- Power electronic devices (Schottky diodes, vertical power transistors)
- RF and high-frequency devices (HEMTs for 5G/6G applications)
- High-brightness LEDs and laser diodes
- High electron mobility transistors (HEMT) requiring low-defect,native GaN substrates

GALLIUM NITRIDE (GAN) WAFER SPECIFICATIONS			
GROWTH METHOD	HVPE		
Conduct Type	Semi-Insulating	N	N
Type/Dopant	Fe	Ge	Undoped
Size	10×10.5mm / 100.5 ± mm		
OF location/length	<1-100> ± 0.5° / 32.0 ± 1.0mm		
IF location/length	<11-20> ± 3° / 18.0 ± 1.0mm		
Orientation	C-plane<0001> off angle toward M-Axis 0.35° ± 0.15°		
Resistivity(300k)	≥1E6 ohm-cm <0.05ohm.cm <0.5ohm.cm		
EPD	(1~9)E5/cm2,5E5~3E6/cm2,(1~3)E6/cm2		
Ra(nm)	Front surface Ra ≤0.2nm		
TTV(um)	≤ 15		
Bow(um)	≤ 20		
Wrap(um)	≤ 20		
Epi-ready	Yes		