

Gallium Nitride (GaN)

Gallium nitride belongs to the third generation of semiconductor material with hexagonal wurtzite structure. It has the characteristics of large forbidden band width, high thermal conductivity, high temperature resistance, radiation resistance, acid and alkali resistance, high strength and high hardness. It has broad application potential and good market prospects in the fields of high-brightness blue, green, purple and white light diodes, blue and purple lasers, and anti-radiation, high-temperature and high-power microwave devices.



PARAMETERS

Type	Free Standing GaN Substrate				GaN on Al ₂ O ₃ Composite Substrate	
Item No.	FR-U-1010 FR-U-1015	FR-N-1010 FR-N-1015	FR-SI-1010 FR-SI-1015	FR-U-50 FR-N-50 FR-SI-50	FR-U-100 FR-N-100	GaN-CP-U-50S GaN-CP-U-100S GaN-CP-N-50S GaN-CP-N-100S
Dimensions	10.0×10.5mm ² , 10.0×15mm ² , Φ50.8mm, Φ100mm, customized					
Thickness	300 ± 25 μm, 350 ± 25 μm, 400 ± 25 μm, customized					
Orientation	C-axis(0001) ± 0.25°					
TTV	≤15 μm					
BOW	≤20 μm					
Conduction Type	N-type	N-type	Semi-Insulating	Be customized as the left items.		
Resistivity(300K)	<0.5 Ω·cm	<0.05 Ω·cm	>10 ⁶ Ω·cm			
Dislocation Density	From 1 x 10 ⁵ to 3 x 10 ⁶ cm ⁻²					
Useable Surface Area	> 90%					
Polishing	Front Surface: Ra < 0.2nm. Epi-ready Back Surface: Fine ground.					
Package	Class 100 clean bag, in single wafer containers, under a nitrogen atmosphere.					
Schetch						