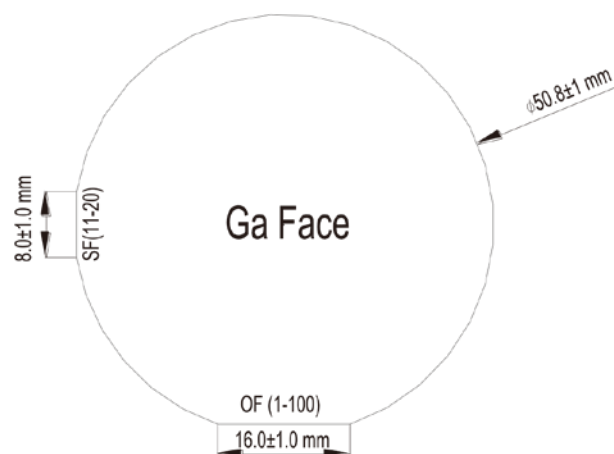


2 inch Free-Standing GaN wafer



性能参数 Specifications:

产品型号 Item	GaN-FS-C-U-C50	GaN-FS-C-N-C50	GaN-FS-C-SI-C50
尺寸 Dimensions	$\Phi 50.8 \text{ mm} \pm 1 \text{ mm}$		
厚度 Thickness	$350 \pm 25 \mu\text{m}$		
有效面积 Useable Surface Area	$> 90\%$		
晶体取向 Orientation	C-plane (0001) off angle toward M-Axis $0.35^\circ \pm 0.15^\circ$		
主定位边 Orientation Flat	$(1-100) \pm 0.5^\circ, 16.0 \pm 1.0 \text{ mm}$		
次定位边 Secondary Orientation Flat	$(11-20) \pm 3^\circ, 8.0 \pm 1.0 \text{ mm}$		
TTV(Total Thickness Variation)	$\leq 15 \mu\text{m}$		
弯曲度 BOW	$\leq 20 \mu\text{m}$		
导电类型 Conduction Type	N-type	N-type	Semi-Insulating (Fe-doped)
电阻率 Resistivity(300K)	$< 0.1 \Omega \cdot \text{cm}$	$< 0.05 \Omega \cdot \text{cm}$	$> 10^6 \Omega \cdot \text{cm}$
位错密度 Dislocation Density	From $1 \times 10^5 \text{ cm}^{-2}$ to $3 \times 10^6 \text{ cm}^{-2}$		
抛光 Polishing	Front Surface: $R_a < 0.2 \text{ nm}$ (polished); or $< 0.3 \text{ nm}$ (polished and surface treatment for epitaxy)		
	Back Surface: $0.5 \sim 1.5 \mu\text{m}$; option: $1 \sim 3 \text{ nm}$ (fine ground); $< 0.2 \text{ nm}$ (polished)		
包装 Package	Packaged in a class 100 clean room environment, in single wafer containers, under a nitrogen atmosphere.		

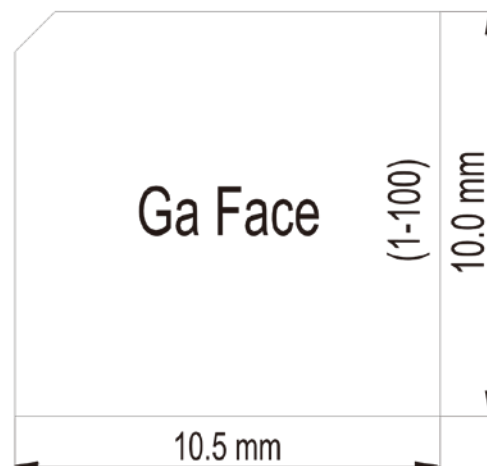
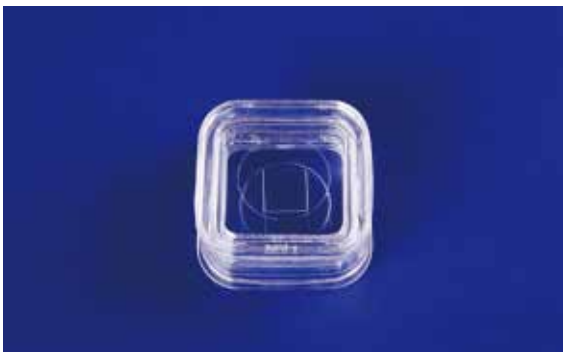


Free-Standing GaN substrates



性能参数 Specifications:

产品型号 Item	GaN-FS-C-U-S10	GaN-FS-C-N-S10	GaN-FS-C-SI-S10
尺寸 Dimensions	10.0 x 10.5 mm ²		
厚度 Thickness	350 ± 25 μm		
晶体取向 Orientation	C-plane (0001) off angle toward M-Axis 0.35° ± 0.15°		
TTV(Total Thickness Variation)	≤ 10 μm		
弯曲度 BOW	≤ 10 μm		
导电类型 Conduction Type	N-type	N-type	Semi-Insulating (Fe-doped)
电阻率 Resistivity(300K)	< 0.1 Ω·cm	< 0.05 Ω·cm	> 10 ⁶ Ω·cm
位错密度 Dislocation Density	From 1x10 ⁵ cm ⁻² to 3x10 ⁶ cm ⁻²		
有效面积 Useable Surface Area	> 90%		
抛光 Polishing	Front Surface: Ra < 0.2 nm (polished); or < 0.3 nm (polished and surface treatment for epitaxy)		
	Back Surface: 0.5~1.5 μm; option: 1~3 nm (fine ground); < 0.2 nm (polished)		
包装 Package	Packaged in a class 100 clean room environment, in single wafer containers, under a nitrogen atmosphere.		

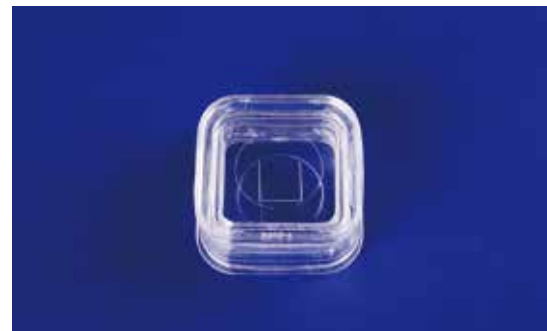
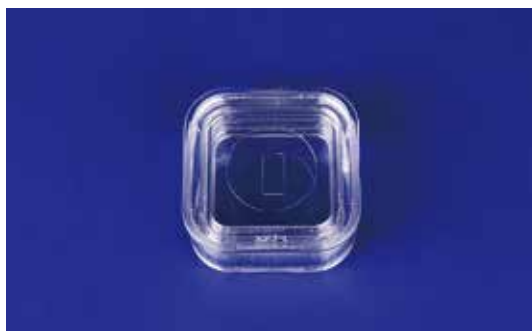
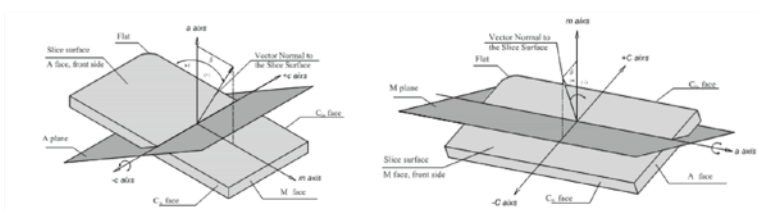


Non-Polar and Semi-Polar Free-Standing GaN substrates



性能参数 Specifications:

产品型号 Item	GaN-FS-A-U/N/SI-S	GaN-FS-M-U/N/SI-S	GaN-FS-SP-U/N/SI-S
尺寸 Dimensions	5.0~10.0 × 10.0 mm ²		
	5.0~10.0 × 20.0 mm ²		
厚度 Thickness	350 ± 25 μm		
晶体取向 Orientation	(11-20)	(1-100)	(20-21) (20-2-1) (11-22) (10-11)
TTV(Total Thickness Variation)	≤ 10 μm		
弯曲度 BOW	≤ 10 μm		
导电类型 Conduction Type	N-type < 0.1 Ω·cm		
电阻率 Resistivity(300K)	N-type < 0.05 Ω·cm		
	Semi-Insulating(Fe-doped) > 10 ⁶ Ω·cm		
位错密度 Dislocation Density	From 1×10 ⁵ to 3×10 ⁶ cm ⁻²		
有效面积 Useable Surface Area	> 90%		
抛光 Polishing	Front Surface: Ra < 0.2 nm (polished)		
	Back Surface: 1~3 nm (fine ground); option: < 0.2 nm (polished)		
包装 Package	Packaged in a class 100 clean room environment, in single wafer containers, under a nitrogen atmosphere.		



その他絵の形状についてもご相談ください。