

苏州纳维科技有限公司 产品规格性能参数总表

Suzhou Nanowin Science & Technology Co. Ltd.

Product Specifications

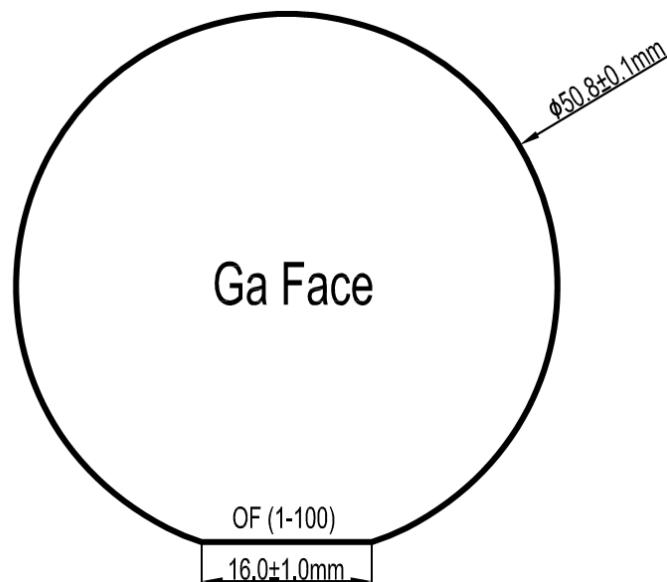
市场营销部

Marketing Department

2 英寸氮化镓厚膜晶片
2 inch GaN Templates

性能参数 Specifications:

产品型号 Item	GaN-T-C-U-C50	GaN-T-C-N-C50	GaN-T-C-P-C50
尺寸 Dimensions	Φ 50.8mm \pm 0.1mm		
厚度 Thickness	4 μ m, 20 μ m		4 μ m
晶体取向 Orientation	C-plane(0001) \pm 0.5°		
导电类型 Conduction Type	N-type (undoped)	N-type (Si-doped)	P-type (Mg-doped)
电阻率 Resistivity(300K)	< 0.5 Ω ·cm	< 0.05 Ω ·cm	~ 10 Ω ·cm
载流子浓度 Carrier Concentration	< 5×10^{17} cm ⁻³	> 1×10^{18} cm ⁻³	> 6×10^{16} cm ⁻³
迁移率 Mobility	~ 300 cm ² /Vs	~ 200 cm ² /Vs	~ 10 cm ² /Vs
位错密度 Dislocation Density	Less than 5×10^8 cm ⁻²		
衬底结构 Substrate structure	GaN on Sapphire(Standard: SSP Option: DSP)		
有效面积 Useable Surface Area	> 90%		
包装 Package	Packaged in a class 100 clean room environment, in cassettes of 25pcs or single wafer containers, under a nitrogen atmosphere.		

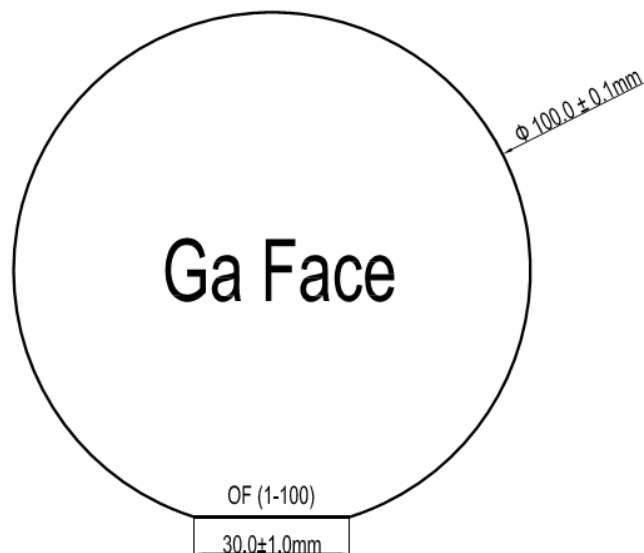


** Other thickness can be customized*

4 英寸氮化镓厚膜晶片
4 inch GaN Templates

性能参数 Specifications:

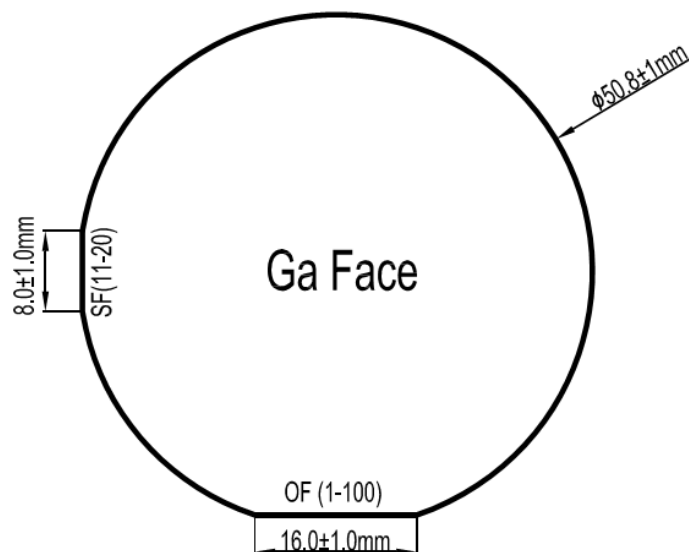
产品型号 Item	GaN-T-C-U-C100	GaN-T-C-N-C100
尺寸 Dimensions	Φ 100mm \pm 0.1mm	
厚度 Thickness	4 μ m, 20 μ m	
晶体取向 Orientation	C-plane(0001) \pm 0.5°	
导电类型 Conduction Type	N-type (undoped)	N-type (Si-doped)
电阻率 Resistivity(300K)	$<$ 0.5 $\Omega \cdot$ cm	$<$ 0.05 $\Omega \cdot$ cm
载流子浓度 Carrier Concentration	$<$ 5×10^{17} cm ⁻³	$>$ 1×10^{18} cm ⁻³
迁移率 Mobility	\sim 300 cm ² /Vs	\sim 200 cm ² /Vs
位错密度 Dislocation Density	Less than 5×10^8 cm ⁻²	
衬底结构 Substrate structure	GaN on Sapphire(Standard: SSP Option: DSP)	
有效面积 Useable Surface Area	$>$ 90%	
包装 Package	Packaged in a class 100 clean room environment, in cassettes of 25pcs or single wafer containers, under a nitrogen atmosphere.	



2 英寸氮化镓自支撑晶片
2 inch Free-Standing GaN Substrates

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 (undoped)	N-type (Ge-doped)	Semi-Insulating (Fe-doped)
电阻率 Resistivity(300K)	$< 0.5 \Omega \cdot \text{cm}$	$< 0.05 \Omega \cdot \text{cm}$	$> 10^6 \Omega \cdot \text{cm}$
位错密度 Dislocation Density	Less than $5 \times 10^5 \text{ cm}^{-2}$		
抛光 Polishing	Front Surface: $R_a < 0.2\text{nm}$. Epi-ready polished Back Surface: Fine ground		
包装 Package	Packaged in a class 100 clean room environment, in single wafer containers, under a nitrogen atmosphere.		

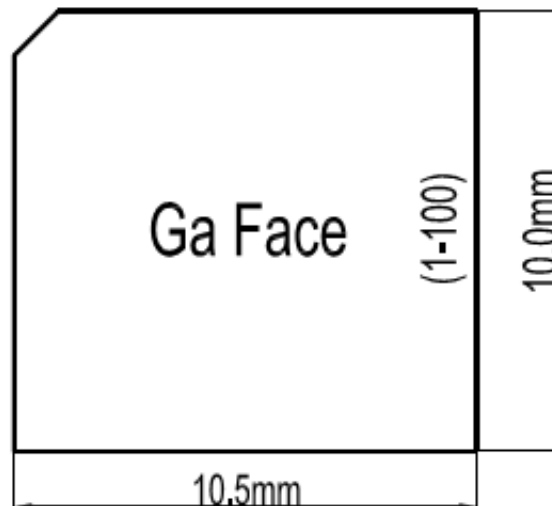


*** 3inch and 4inch Free-Standing GaN Substrates are coming soon.**

定制尺寸氮化镓自支撑晶片
Free-standing GaN Substrates (Customized size)

性能参数 Specifications:

产品型号 Item	GaN-FS-C-U-S10*10	GaN-FS-C-N-S10*10	GaN-FS-C-SI-S10*10
尺寸 Dimensions	10.0mm × 10.5mm; ±0.2mm		
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 (undoped)	N-type (Ge-doped)	Semi-Insulating (Fe-doped)
电阻率 Resistivity(300K)	< 0.5 Ω·cm	< 0.05 Ω·cm	> 10 ⁶ Ω·cm
位错密度 Dislocation Density	Less than 5×10 ⁵ cm ⁻²		
有效面积 Useable Surface Area	> 90%		
抛光 Polishing	Front Surface: Ra < 0.2nm. Epi-ready polished Back Surface: Fine ground		
包装 Package	Packaged in a class 100 clean room environment, in single wafer containers, under a nitrogen atmosphere.		

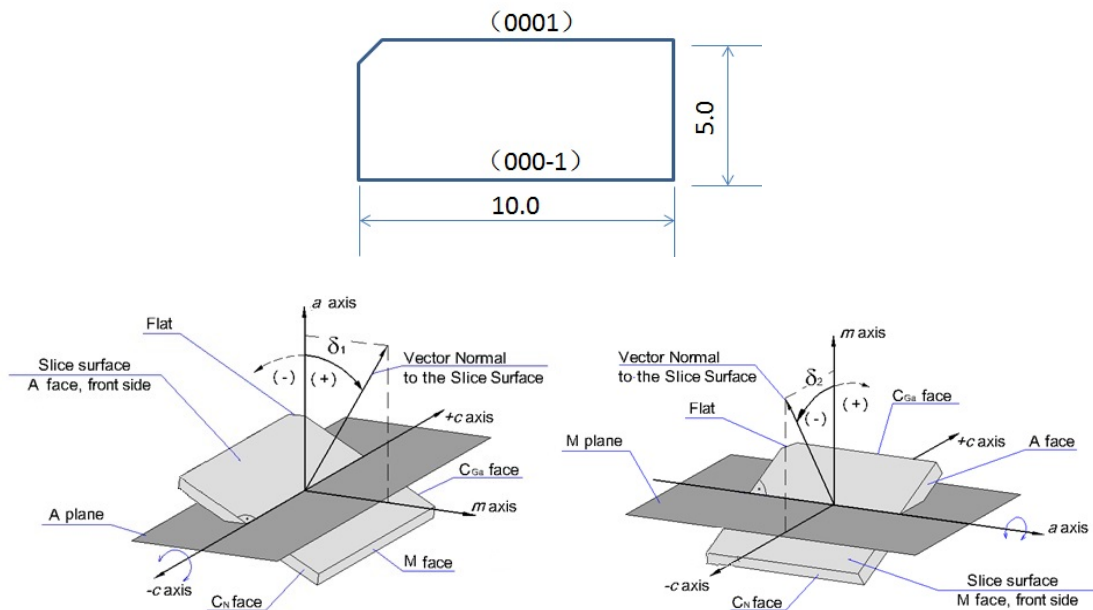


*** Other size can be customized (e.g. 14.0mm × 15.0mm, Φ 25.4mm, Φ 38.1mm)**

非极性半极性氮化镓自支撑衬底

Non-Polar and Semi-Polar Freestanding 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	5.0~10.0mm × 10.0mm; ±0.2mm		
	5.0~10.0mm × 20.0mm; ±0.2mm		
厚度 Thickness	350 ± 25 μm		
晶体取向 Orientation	A-plane(11-20) off angle toward C-Axis $-1^\circ \pm 0.2^\circ$	M-plane(1-100) off angle toward C-Axis $-1^\circ \pm 0.2^\circ$	(20-21) (20-2-1) (11-22) (30-31) (10-11)
TTV(Total Thickness Variation)	$\leq 10 \mu\text{m}$		
弯曲度 BOW	$\leq 10 \mu\text{m}$		
导电类型 Conduction Type 电阻率 Resistivity(300K)	N-type(undoped) < 0.5 Ω·cm		
	N-type(Ge-doped) < 0.05 Ω·cm		
	Semi-Insulating(Fe-doped) > 10 ⁶ Ω·cm		
位错密度 Dislocation Density	Less than 5x10 ⁵ cm ⁻²		
有效面积 Useable Surface Area	> 90%		
抛光 Polishing	Front Surface: Ra < 0.2nm. Epi-ready polished Back Surface: Fine ground		
包装 Package	Packaged in a class 100 clean room environment, in single wafer containers, under a nitrogen atmosphere.		

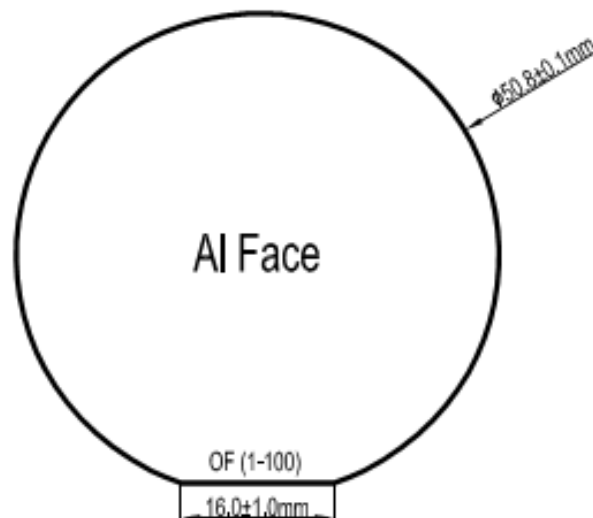


*** Other thickness, size and offcut can be customized**

氮化铝厚膜晶片
2" AlN Templates

性能参数 Specifications:

产品型号 Item	AlN-T-C-C50
尺寸 Dimensions	Φ 50.8mm \pm 0.1mm
衬底 Substrate	Sapphire (Single Side Polished)
厚度 Thickness	4 ~ 5 μ m
晶体取向 Orientation	C-plane (0001) \pm 1°
导电类型 Conduction Type	Semi-Insulating
晶体质量 Crystalline quality	XRD FWHM of (0002) < 350 arcsec. XRD FWHM of (10-12) < 450 arcsec
边缘禁区 Exclusion zone	< 2 mm
表面粗糙度 Surface Roughness	Ra < 1.5 nm (10 μ m * 10 μ m)
包装 Package	Packaged in a class 100 clean room environment, in cassettes of 25pcs or single wafer containers, under a nitrogen atmosphere.



*Other thickness, size can be customized