

Capability: 8" GaN-on-Si Epi

8" GaN-on-Si Epiwafer			
ITEMS		Typical	Metrology
Total thickness (μm)	Mean	<6, customized	EpiTT in-situ reflectance
	σ/avg	1.5%	
P-GaN thickness (nm)	Mean	80	XRR/Epi TT
	σ/avg	2.5%	
P-GaN doping (cm^{-3})	Mg	3E+19	SIMS
AlGaN barrier thickness (nm)	Mean	15	XRR
	σ/avg	2 %	
Barrier Al(%)	Mean	20	Monitor wafer by PL
	σ/avg	1 %	
GaN FWHM (arcsec)	(002)	600	XRD
	(102)	1200	
2DEG carrier concentration (cm^{-2})	D-mode	$\geq 5\text{E}+12$	Hall
2DEG Mobility (cm^2/Vs)	D-mode	≥ 1500	Hall
Roughness (Ra, nm)	pGaN surface	0.5	AFM($5*5\mu\text{m}^2$)
Particle (Size>0.5 μm , 3mm EE)		≤ 1000	KLA 6220
Warp (μm)		≤ 50	ADE 9000
Crack @ Radius 0~97mm (3mm EE)		Free	Spot Light/OM
Peeling		Free	Spot Light