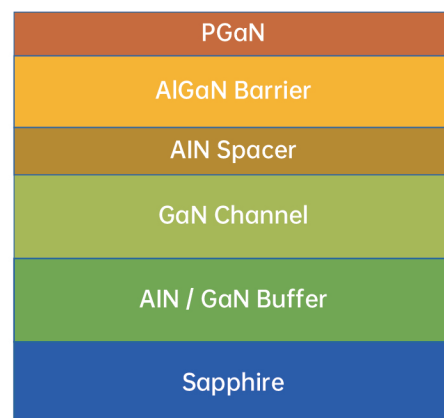


GaN on Sapphire EPI Wafers E-Mode Lateral Structure

JGETLBX-L4/6

Product Characteristics

- 4-inch and 6-inch available
- Buffer breakdown voltage > 650V
- Edge cracks < 3mm
- Customized AlGaN and pGaN layer
- High repeatability and good uniformity



E-Mode Lateral Structure

Product Specification

Parameter	SPEC	Measurement technique/tool/conditions	Comments
Substrate			
Thickness (um)	1000	Micrometer	
Flat length (mm)	47.5	/	
Bevel design	C-M 0.2°	/	
Wafer bow	≤20 um	Stress Mapper	
Epi			
EPI total thickness (um)	2~4	PL	Base on request
Finished 650V EPI wafer bow (6inch) in um	≤±35	Stress Mapper	
EPI surface rms roughness (AFM, indicate scan size in um ²)	≤1 nm in 5x5 um ²	AFM	
Capping layer thickness (nm)	/	TEM	GaN cap : 3nm SiN cap: 3~100nm
pGaN layer thickness (nm)	100±10	TEM	Base on request
Mg chemical concentration (at/cm ³) PCOR-SIMS	3E+19&4e+19	PCOR-SIMS	E-mode
Mg/H in pGaN(a.u.) PCOR-SIMS	>=2	PCOR-SIMS	E-mode
AlGaN barrier Al percentage	0.18	PL	Base on request
AlGaN barrier thickness (nm)	15	TEM	Base on request
AlN spacer thickness (nm)	0.5	/	Base on request
GaN FWHM (102)	< 500 arcsec	XRD	
GaN FWHM (002)	< 400 arcsec	XRD	