



1 inch C-plane n-type very-high-electron-concentration AMMONO-GaN substrate.  
The substrate is sliced from a mono-crystalline bulk material grown by ammonothermal method.

### TECHNICAL SPECIFICATION

DESCRIPTION	UNIT	VALUE
<b>General specification</b>		
Orientation		(0001) C plane
Thickness	μm	350 (±100)
Dimension(s)	mm	Ø25,7 (±0,5)
Primary Flat (PF)	mm	12 (±1)
Secondary Flat (SF)	mm	8 (±1)
Bow	μm	≤ 10
Total Thickness Variation (TTV)	μm	≤ 40

### Structural specification

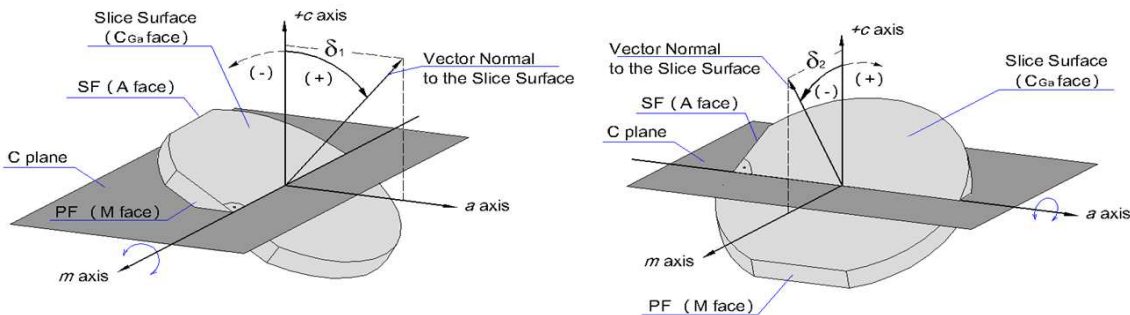
Etch Pit Density (EPD)	cm <sup>-2</sup>	< 5 x 10 <sup>4</sup>
FWHM of X-ray rocking curve, epi-ready surface at 100 μm x 100 μm slit	arcsec	~ 20
Macrodefects		Up to 2 cracks per substrate, each within a circle of 1 mm diameter

### Electrical specification

Conductivity		n type
Carrier concentration	cm <sup>-3</sup>	~ 10 <sup>19</sup>
Resistivity	Ω*cm	10 <sup>-3</sup> - 10 <sup>-2</sup>
Mobility	cm <sup>2</sup> /V*s	~ 150

### MISORIENTATION

(measured in the center of the substrate)

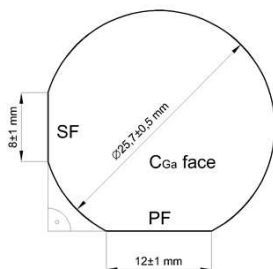


Off M face		deg	0 (±0,25)
C face	angle δ <sub>1</sub>	deg	0 (±0,20)
	angle δ <sub>2</sub>	deg	±0,3 (±0,20)

### SURFACE PREPARATION

Front side		Epi-ready polished (RMS < 0,5 nm)
Back side		Roughly polished

### SUBSTRATE SHAPE



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