



10 mm x 10 mm (10-10) M-plane n-type very-high-electron-concentration AMMONO-GaN substrate.
The substrate is sliced from a mono-crystalline bulk material grown by the ammonothermal method.

TECHNICAL SPECIFICATION

DESCRIPTION	UNIT	VALUE
General specification		
Orientation		(10-10) M plane
Thickness	μm	350 (±100)
Dimension(s) (h x w)	mm	10 (±0,5) x 10 (±0,5)
Primary Flat (PF)	mm	3 (±0,5)
Secondary Flat (SF)	mm	1,5 (±0,5)
Bow	μm	≤ 10
Total Thickness Variation (TTV)	μm	≤ 20

Structural specification

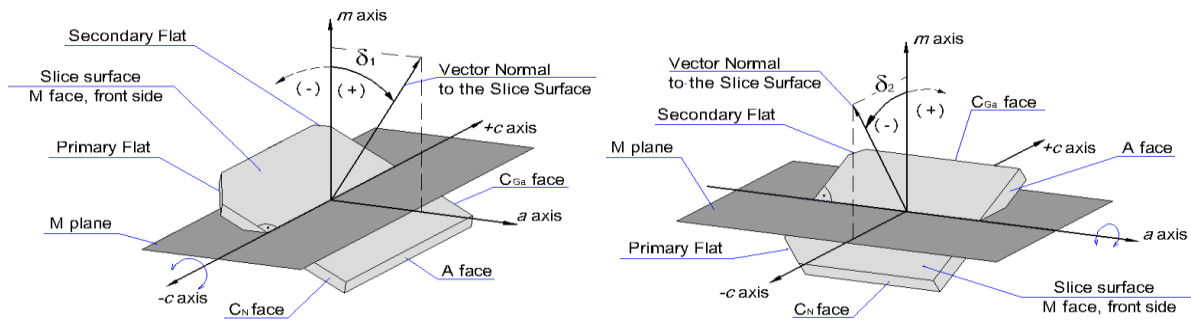
Etch Pit Density (EPD)	cm ⁻²	< 5 x 10 ⁴
FWHM of X-ray rocking curve, epi-ready surface at 100 μm x 100 μm slit	arcsec	~ 20
Macrodefects		none

Electrical specification

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

MISORIENTATION

(measured in the center of the substrate)

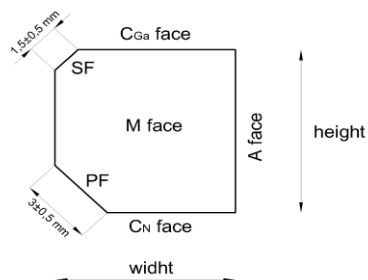


Off A face		deg	0 (±0,25)
M face	angle δ ₁	deg	0 (±0,20)
	angle δ ₂	deg	-1 (±0,20)

SURFACE PREPARATION

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

SUBSTRATE SHAPE



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