

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

TECHNICAL SPECIFICATION

DESCRIPTION	UNIT	VALUE
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General specification

Orientation		(10-10) M plane
Thickness	μm	350 (±50)
Dimension(s)	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	0 (±10)
Total Thickness Variation (TTV)	μm	≤ 20

Structural specification

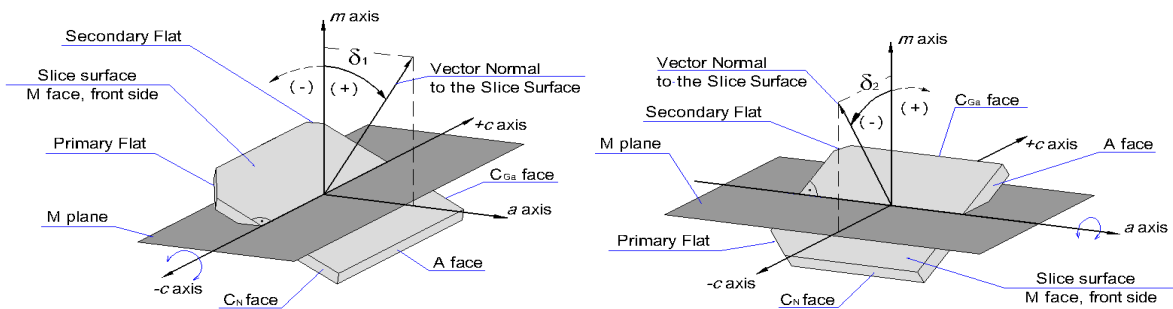
Etch Pit Density (EPD)	cm ⁻²	< 5 x 10 ⁴
FWHM (0002) of X-ray rocking curve, epi-ready surface at 100 μm x 100 μm slit	arcsec	~ 20
Macro defects		none

Electrical specification

Type of conductivity		n type
Carrier concentration	cm ⁻³	~ 10 ¹⁹
Resistivity	Ω*cm	~ 10 ⁻³
Carrier mobility	cm ² /V*s	~ 150

MISORIENTATION

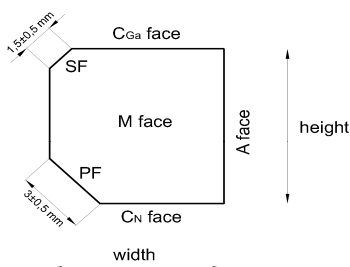
(measured in the center of the substrate)



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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