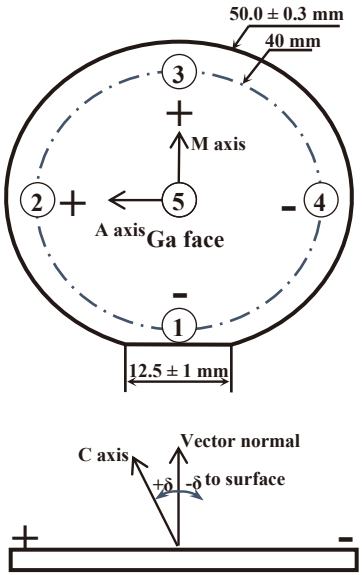
GaN 2 “Free-standing N-Type Wafer

2-inch Free-standing N-GaN Substrates

	Production (P)			Research (R)	Dummy (D)
	P+	P	P−		
Item	GaN-FS-C-N-C50-SSP				
Dimension	50.0 ± 0.3 mm				
Thickness	400 ± 30 μm				
Orientation flat	(1-100) ± 0.1°, 12.5 ± 1 mm				
TTV	≤ 15 μm				
BOW	≤ 20 μm				
Resistivity (300K)	≤ 0.02 Ω·cm for N-type (Si-doped)				
Ga face surface roughness	≤ 0.3 nm (polished and surface treatment for epitaxy)				
N face surface roughness	0.5 ~1.5 μm (single side polished)				
C plane (0001) off angle toward M-axis (miscut angles)	0.55 ± 0.1° (5 points)	0.55 ± 0.15° (5 points)		0.55 ± 0.15° (3 points)	
Threading dislocation density	≤ 7.5 x 10^5 cm^{-2}	≤ 3 x 10^6 cm^{-2}			
Number and max size of holes in Φ47 mm in the center	0		≤ 3@1000 μm	≤ 12@1500 μm	≤ 20@3000 μm
Useable area	≥ 90%			≥ 80%	≥ 70%
Package	Packaged in a cleanroom in single wafer container				



Note:
(1) 5 points: the miscut angles of 5 positions are 0.55 ± 0.15°
(2) 3 points: the miscut angles of positions (2, 4, 5) are 0.55 ± 0.15°
(3) Useable area: exclusion of peri -phery and macro defects (holes)

Please consult with us about other shapes.

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