

AIN Single Crystal Substrate

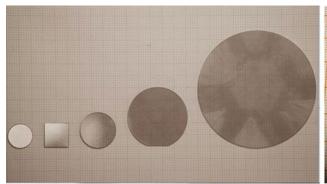
AIN Single Crystal Substrate has the advantages of a wide bandgap, high breakdown electric field, high thermal conductivity, high electron saturation rate, and high radiation resistance. Nextgen Advanced Materials supplies AIN Single Crystal Substrate with high-quality and competitive price. With our strong R&D and manufacturing capability, we can do customization.

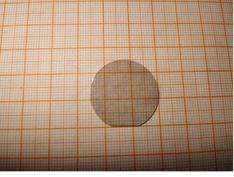
Product Description

You can rest assured to buy customized Nextgen AIN Single Crystal Substrate from us. AIN single crystal substrate is a wide bandgap semiconductor material with exceptional characteristics.

The band gap is 6.2eV and has a direct band gap. It is an important blue and ultraviolet light-emitting material with high thermal conductivity, high melting point, high resistivity, strong breakdown field and low dielectric coefficient. It is an excellent electronic material for high temperature, high frequency and high-power devices.

In view of the excellent physical properties of the above-mentioned AIN materials, AIN crystals are ideal substrates for GaN, AIGaN and AIN epitaxial materials. Compared with sapphire or SiC substrates.





Specification	
Item	TGS-AIN-025B
Size (mm)	25.4 ± 0.5
Thickness (µm)	400 ± 50
Crystal form	2H
Crystal direction	{0001} ± 0.5 °

Tel: +86-818-9683600 E-mail: sales@nexgematerials.com



Nextgen Advanced Materials TO BE THE BEST	Nextgen Advanced Materials INC www.nexgematerials.com
Surface polishing	aluminum surface: chemical polishing
RMS (nm)	Roughness of aluminum surface: ≤ 0.5nm
RMS (nm)	Nitrogen side (back): ≤ 1.2um
Shape	Circular shape with locating edge
Quality grade	P (production)
HRXRD FWHM @(0002)	≤300
(arcsec)	
HRXRD	
FWHM @(10-02)	≤200
(arcsec)	
absorption coefficient	≤70
@265nm (cm-1)	
Edge removal area (mm)	1
Scratch	free
Collapse edge	none
Usable area	≥80%
Main positioning edge orientation	{10-10} ± 5.0°
Orientation of secondary positioning	surface to aluminum: surface: rotate 90 ° ± 5 ° clockwise along
	the direction of main
	positioning edge
	Nitrogen side: rotate 90 ° ± 5 ° anticlockwise along the
	direction of the main positioning edge
TTV (µm)	≤ 30
Warpage (µ m)	≤ 30
BOW (µm)	≤ 30
Crack	The crack is located at the edge of the wafer and < 1mm
Hexagonal hole	size<300um, and number ≤ 2

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