



# GaN Substrates: Non-Polar

Kyma’s non-polar bulk GaN substrates are free of stacking faults and further improve device epitaxy by reducing dislocation density by 10,000x and doubling thermal conductivity when compared to other non-native substrates. GaN substrates provide an alternative to multi-step nucleation processes, allowing customers to:

- Eliminate interlayers
- Eliminate processing steps
- Improve device yield and reliability



Orientation: m-plane and a-plane  $\pm 1.0^\circ$

Conduction Type: N-type

Resistivity:  $<5 \text{ Ohm-cm}$

Front Surface Finish: Epi-ready, RMS  $<0.5 \text{ nm}$

Back Surface Finish: Optical polish, RMS  $<1 \text{ }\mu\text{m}$

Dislocation Density:  $<5 \times 10^6 \text{ cm}^{-2}$

Edge Exclusion Area: 1 mm

Available Sizes: 5 mm x 10 mm and irregular bars

Available Grades: Production, Research and Rider

Available Thickness:  $475 \text{ }\mu\text{m} (\pm 25 \text{ }\mu\text{m})$

Grade:	Production	Research	Rider
Useable Surface Area:	100%	$\geq 90\%$	$<90\%$

*Other polishing options available: double-side CMP, double-side optical  
Other thickness, size and offcut options available*