



# AlN Templates on Silicon

Kyma AlN templates grown by PVDNC™ provide a high purity AlN buffer for subsequent GaN device epitaxy. Kyma AlN PVD based templates have several advantages over MOCVD and other PVD growth approaches which include:

- Increase in MOCVD throughput by eliminating the nucleation layer steps
- Higher LED brightness due to substantial dislocation density reduction
- Protective AlN buffer layer allows GaN deposition using any growth method
- PVDNC™ AlN offers significantly lower cost and superior scalability versus MOCVD AlN

Silicon Orientation: (111)

AlN Orientation: C-plane (00.1)

Silicon Conduction Type: Semi-insulating, N-type, or P-type

Front Surface Finish (Al-face): As-grown, Epi-ready

Back Surface Finish: SSP or DSP silicon from vendor

Edge Exclusion Area: 1 mm for 2-3" & 5 mm for 4-12"

Available Sizes: 2" (50.8 mm) - 12" (300mm)

Available Grades: Prime and Research

Available Thickness: 200nm ( $\pm 5\%$ )

*\*Custom thickness options available 10nm-200nm*



Grade:	Prime	Research
Macro Defect Density:	$\leq 5 \text{ cm}^{-2}$	$> 5 \text{ cm}^{-2}$
Useable Surface Area	$\geq 90\%$	$< 90\%$

*Other silicon types and thickness options available upon request*