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Template Products Offered

- 5 μ m AlGaN on sapphire

AlGaN Template Properties Measured

- Bow
 - Typical bow for 5um Al(.90)Ga(.10)N template is <50um
- Surface Finish / Roughness
- Resistivity
 - Typical resistivity for 5um Al(.90)Ga(.10)N template is >10⁶ Ohm-cm
- x_{Al} Content
- FWHM 2 θ

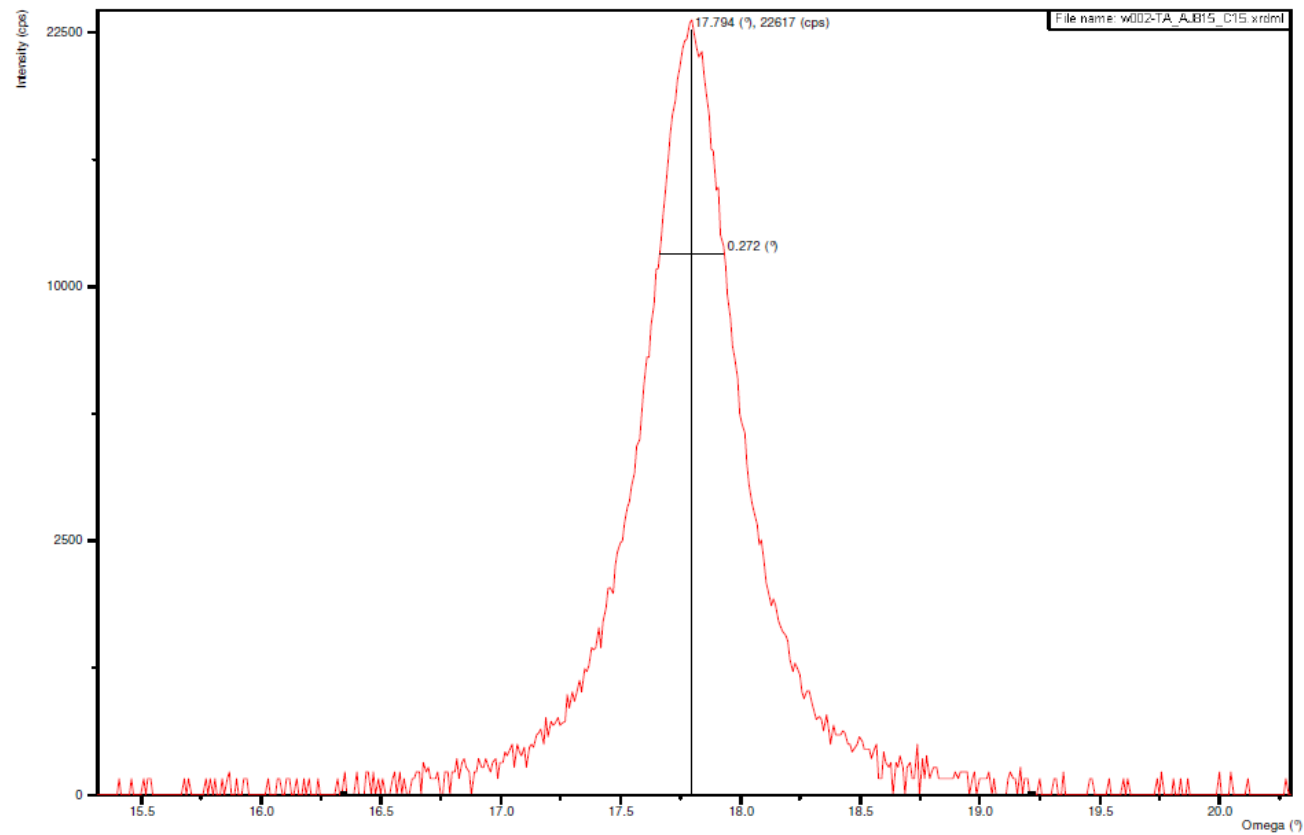
The New Wave in Nitride Semiconductor Materials

High Resolution XRD

Typical (00.2) Rocking Curve of a 5 μ m Al(.90)Ga(.10)N template

HRXRD -002

FWHM=16.3arcmin



The New Wave in Nitride Semiconductor Materials

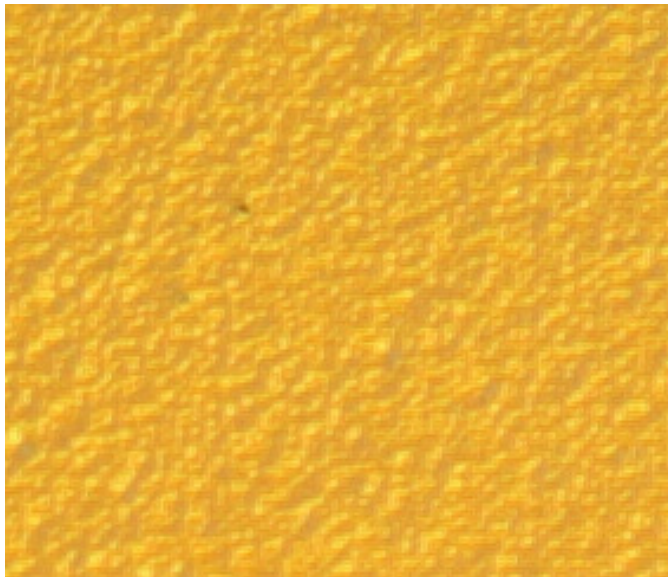


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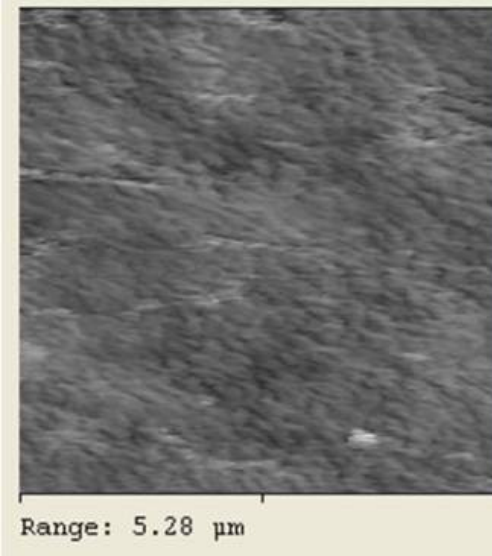


Template Surfaces

- Surface finish is as-grown
 - Nomarski image of 5um AlGa_N film on sapphire shows small surface features
 - AFM image of 5um AlGa_N film on sapphire shows very low surface roughness



20X Nomarski Image



5x5 μm AFM Image

	Whole Area
Total Area	27.9 μm^2
R _a	10.35nm
RMS	13.48nm
Mean	82.08nm
Range	211.70nm



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AlGaN Thickness Uniformity

- Thickness uniformity is measured using a non-contact thickness mapping system
- Typical thickness uniformity for AlGaN templates is +/- 10%

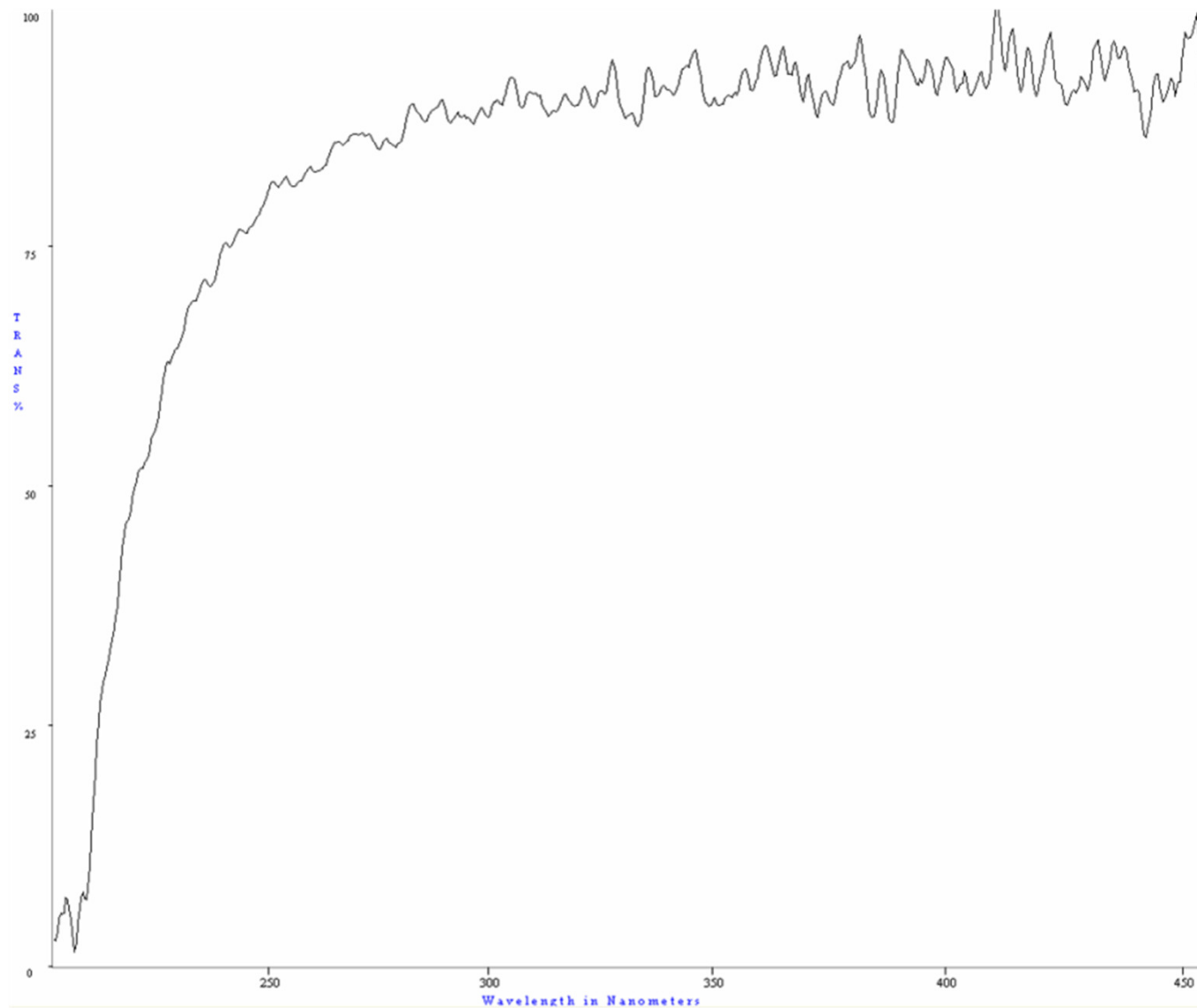


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Transmission





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Summary

- **AlGaN Template products:**
 - Low surface roughness ready for epi growth
 - Good thickness uniformity
 - High resistivity
- Other template options are available upon request