

Semi-Polar (11-22) GaN layer on sapphire

General Product Specifications



Available Semi-Polar (11-22) GaN layer on sapphire

GaN Orientation	(11-22)
GaN Thickness Range	15 – 20 μm
Dislocation Density	$\sim 1 - 5 \times 10^8 \text{ cm}^{-2}$
FWHM of X-ray (11.2) ω-scan	180-300 Arc Sec
Dopant & Carrier Concentration	n-type (Si-doped) : (1 to 3) $\times 10^{18} \text{ cm}^{-3}$ (See note 1)
Sapphire Substrate Size (single-size polished, m-plane)	2" (See note 2)

Note: 1. Undoped material available upon request.
 2. 4" sapphire templates available upon request.

Recent Papers:

Optically-pumped lasing of semi-polar InGaN/GaN (1122) heterostructures.

A. Strittmatter, M. Teepe, Z. Yang, C. Chua, J. Northrup, N. M. Johnson, P. Spiberg, R. G. W. Brown, V. Ivantsov, A. Syrkin, L. Shapovalov, A. Usikov, (to be published in Physica Status Solidi, (2010)).

Structural Characterization of Thick (11-22) GaN Layers Grown by HVPE on M-Plane Sapphire.

A. Usikov, V. Soukhoveev, L. Shapovalova, A. Syrkin, V. Ivantsov, B.Scanlan1, A. Yu. Nikiforov, A. Strittmatter, N. Johnson, J.-G. Zheng, P.Spiberg, H. S. El-Ghoroury (to be published in Physica Status Solidi, (2010)).

GaN layer growth by HVPE on m-plane sapphire substrates.

Alexander Usikov, Lisa Shapovalov, Vladimir Ivantsov, Oleg Kovalenkov, Alexander Syrkin, Philippe Spiberg, and Robert Brown., Physica Status Solidi C 6, No. S2, S321–S324 (2009).