

200-mm HVPE GaN on QST® Template

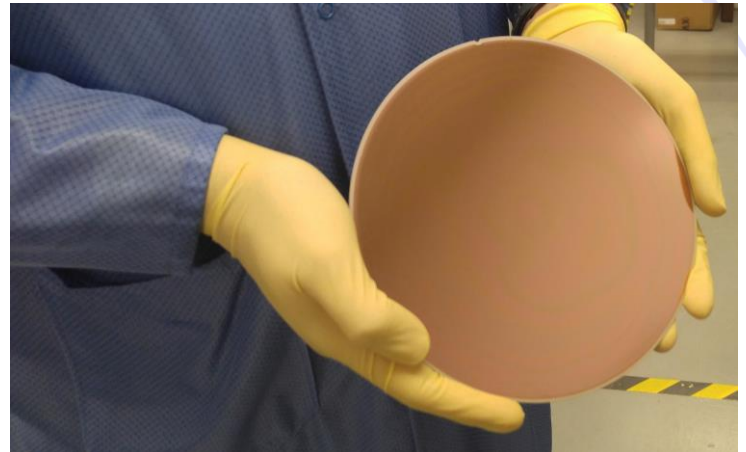
Features

- HVPE GaN grown on QST® substrates provided by Qromis, Inc.
- Engineered base that is thermal expansion matched to GaN
- High-quality epi-ready single-crystal GaN surface
- Fully diameter scalable & silicon fab friendly

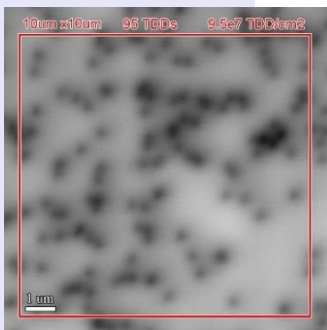
Materials Properties

- Orientation $c+ \pm 0.5^\circ$
- Bow $< 50 \mu\text{m}$
- Defect Density $10^7 - 10^8 \text{ cm}^{-2}$
- XRD (002/102) $< 300 / < 400 \text{ arcsec}$
- Electrical Properties SI to mid 10^{18} cm^{-3}

GaN on QST® enables lower defect density device active regions, reduced MOCVD & MBE cycle time, more uniform epiwafers, and greater device yields

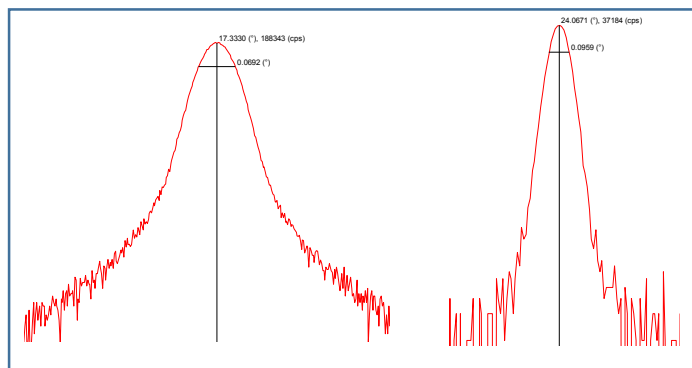


CL



*HVPE GaN on 150-mm QST® Template

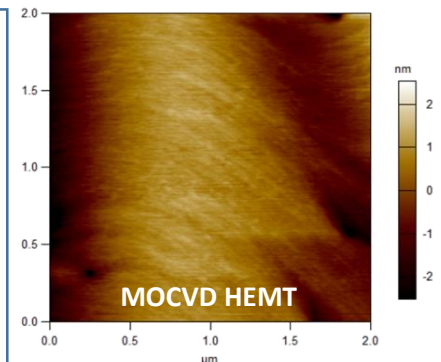
XRD (002)



*10um HVPE GaN on 5um MOCVD GaN on 200-mm QST® Template

XRD (102)

AFM



*MOCVD GaN on QST® Coupon Template