

# NSX® 320 Metrology Series

COMBINING MACRO INSPECTION AND 3D METROLOGY FROM TAMAR FOR ADVANCED PACKAGING APPLICATIONS

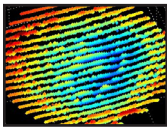


Built on the foundation of the NSX Series defect inspection technology, the NSX Metrology Series incorporates established Tamar 3D measurement capability onto macro inspection systems offering a complete 2D/3D inspection and metrology solution. All NSX 320 Metrology Systems offer macro defect detection (residue, adhesive, post-saw), 2D CD metrology for via, RDL and bump, as well as handling of warped and bonded wafers.

Tamar Technology has worked with industry-leading packaging companies to develop metrology sensors for applications in advanced packaging such as Cu Pillar bumping, TSV and MEMS. Now part of Rudolph, this demonstrated 3D metrology has been integrated onto the NSX Series to offer a complete inspection and metrology system for unique advanced packaging process requirements.

## NSX 320 Wafer Level Packaging Metrology System

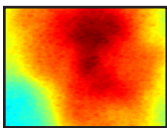
FOR TRANSPARENT FILM THICKNESS MEASUREMENTS



Key applications: photoresist thickness, polyimide and passivation thickness, single layer films

## NSX 320 Advanced Wafer Level Packaging Metrology System

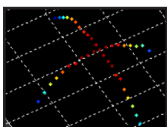
FOR HEIGHT AND TRANSPARENT FILM THICKNESS MEASUREMENTS



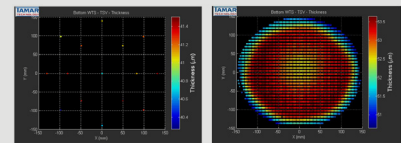
Key applications: wafer shape, bump/nail height, photoresist thickness, wafer thickness, polyimide and passivation thickness, single layer films

## NSX 320 TSV Metrology System

FOR VIA DEPTH AND WAFER THICKNESS MEASUREMENTS



Key applications: via depth (unfilled/filled), TTV, wafer warpage, adhesive thickness, residual silicon thickness



## Localized and Wafer Level Metrology Applications

- Via depth (filled/unfilled)
- TTV/Adhesive Layer (bonded)
- Wafer warpage
- Remaining silicon thickness
- Photo resist (PR) thickness
- Polyimide thickness
- Wafer shape
- Bump/nail height