



NOEL Technologies

NOEL ADVANCED LITHOGRAPHY SERVICES

- **I-line & DUV resist spin coatings**
 - ✓ Materials either provided by customer or from Noel Technologies stock
 - ✓ BARC
 - ✓ TARC
 - ✓ Thickness contour maps available
- **Outsource your ASML “Zero” layer to Noel Technologies**
 - ✓ Start material with patterned and etched “zero” layers
 - ✓ Etch depth SPC controlled to $1200\text{Å} \pm 200\text{Å}$
 - ✓ Prealignment & fine alignment characterization of all wafers, with batch statistics, available
- **Noel Technologies as your lithography cell backup and short term capacity add partner**
 - ✓ Lithography cell qualified to customer specifications
 - ✓ Matched to customer WIP
 - ✓ Regular lithography cell monitoring provides risk free switching
- **Calibrated wafer grid definition and target placement optimization**
 - ✓ Patterned, etched, alignment targets (for any system) placement to an accuracy of $<15\text{nm}$
 - ✓ Alignment targets (for any system) on both sides of the wafer, with an overlay accuracy of $<300\text{nm}$ (front to back)
- **Lens distortion and Focal Plane metrology**
 - ✓ Characterize and monitor your lens X,Y distortion
 - ✓ Characterize and monitor your lens Focal Plane
- **Pilot production runs: Lab to Fab**
 - ✓ Build your product using a foundry lithography system, it’s scalable, ready for production
 - ✓ Outsource your critical layers to reduce your costs
- **Research and Development**
 - ✓ Explore your next technology node using Noel’s lithography cell
 - ✓ Develop your first prototype devices