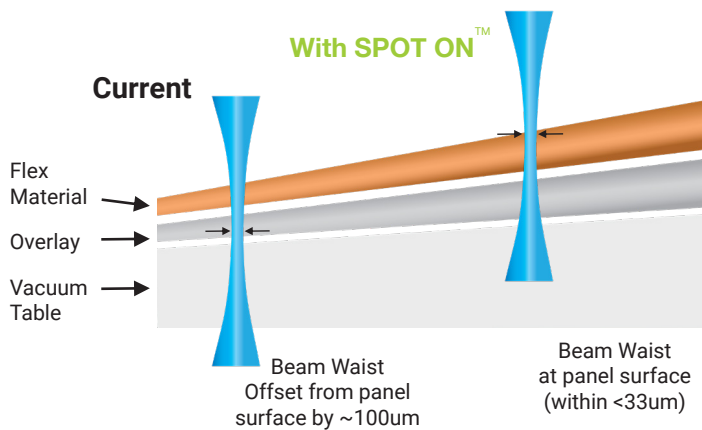# CapStone™ + SPOT ON™ Feature Upgrade

Industry's-first dynamic focus capability improves yield

mks | ESI

Increase via drilling operational performance with CapStone's SPOT ON™ feature upgrade:

- Higher Yield by reducing common via quality issues
- Reduced impact of fleet and lot variability
- Automated laser-to-camera focus offset

Current

With SPOT ON™

Flex Material →

Overlay →

Vacuum Table →

Beam Waist Offset from panel surface by ~100um

Beam Waist at panel surface (within <33um)

SPOT ON™ measures table, overlay, and material height fluctuations.

System automatically compensates for measured fluctuations.

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Beam Location & Control

Automatically measure and validate spot size and focus during production.

Panel Z Mapping

Quickly and accurately measure surface height variations across the processing surface due to vacuum table, overlay and the material before processing.

Realtime Z Control

The system will automatically compensate for z-height fluctuations during production.
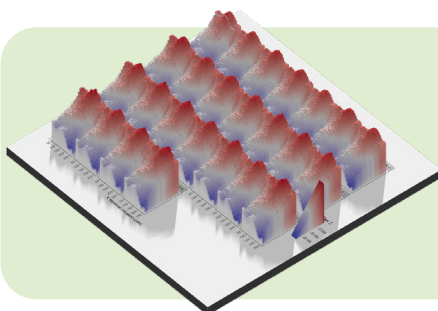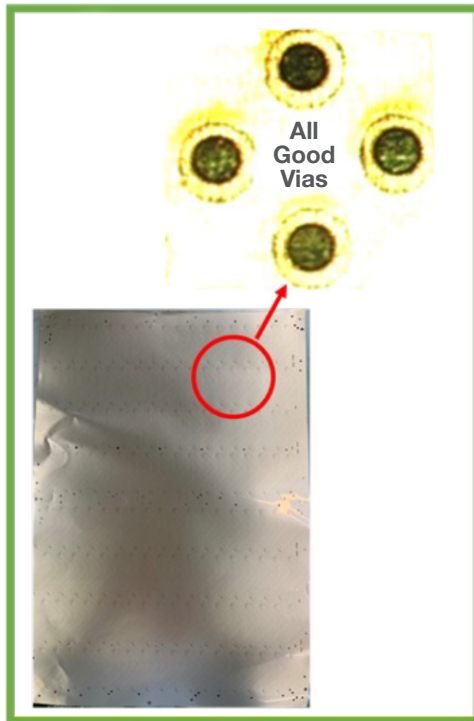

Exclusive Panel Mapping Capabilities

- Now you can increase yield by mapping the panels high and low spots
- Drill better vias and reduce failures caused by PI residue, top copper remain, and bottom copper melt or damage

With SPOT ON™

All Good Vias

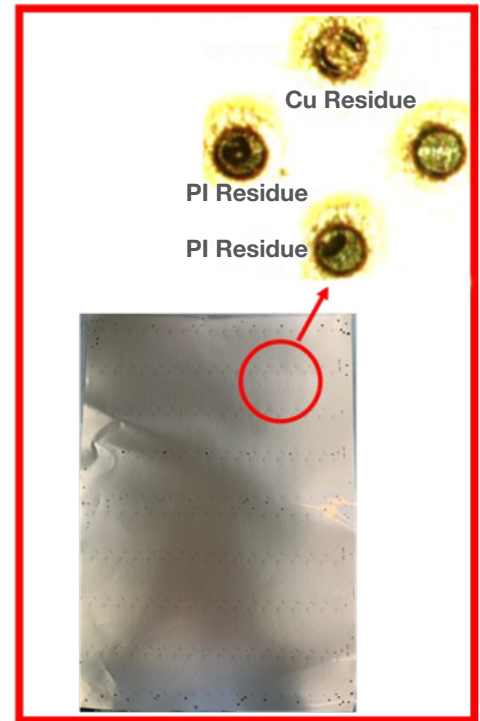**Without SPOT ON™**

Cu Residue

PI Residue

PI Residue

Benefit	Feature	Specification
Higher Yield	Focus Calibration and Accuracy	• Automatic Calibration • Optical method • Accurate to ~10um • Customers do not have to do anything to assure Process Window is centered due to continual updating of focus calibration.
Improved Service Planning and Trouble Shooting	Spot Size and Quality	• Verified on a user defined basis • Data collected into easy-to-read SPC charts showing trends over time.
Higher Yield and Drilling Accuracy	Height Fluctuation Control	• System measures and retains height map on a per job basis • System auto-compensates during processing to maintain ideal focus position to within <30um across the work surface.

Ask an Expert! For facilities guidelines, requirements or more information, please contact your local ESI representative or visit www.esi.com.

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