Advanced Packaging Lithography Leadership



AP 200/300 Stepper for Advanced Packaging, RF and MEMS

Superior Operational Flexibility for Multiple Applications

- > World-class HVM proven platform with full automation, selectable exposure wavelength and universal wafer size capability (6 & 8-in or 8 & 12-in wafers)
- > Adjustable Numerical Aperture projection optics for maximum DoF in thick and thin resists with 0.8 to 2.0 μ m minimum resolution
- > Backside or buried layer IR alignment option for advanced processes including interposers and TSVs





Displacement Maps Micro-chamber Chuck Full Wafer Focus Map Local Topography Fan-Out Chip Map Variable NA $3\mu m$ Line, $10\mu m$ Thick **Projection Optics** Resist(post Cu plating) 0.8µm Line/Space Donut TSV Trench

Key AP200/300 Stepper Advantages

- > Broadband Projection Lens (350 450nm)
- > Variable NA for 0.8µm to 2µm Minimum Resolution and Large Depth-of-Focus
- > Wafer Edge Processing for Electroplating Processes
- > Highest Economic Value with Lowest Production Risk

Warped Wafer Handling (± 10mm)

> Expands process window and yield for warped wafers by reducing chucked wafer flatness to below 1 $\!\mu m$

Full Wafer Mapping (Optical Focus)

> Improves yield for smaller FOWLP feature sizes by providing full wafer topography map with ability to specify up to six locations per field for extremely accurate shot by shot focusing

Variable NA Projection Optics

> Enables high aspect ratio lithography, large depth-of-focus and high wafer plane irradiance for thick resist applications

Sub 1µm Line/Space Resolution

> Reduces cost of high connectivity packages and expands application space by significantly increasing overall I/O density

Find out more at www.ultratech.com or call 408.321.8835 Veeco–Ultratech 3050 Zanker Road, San Jose, CA 95134

