



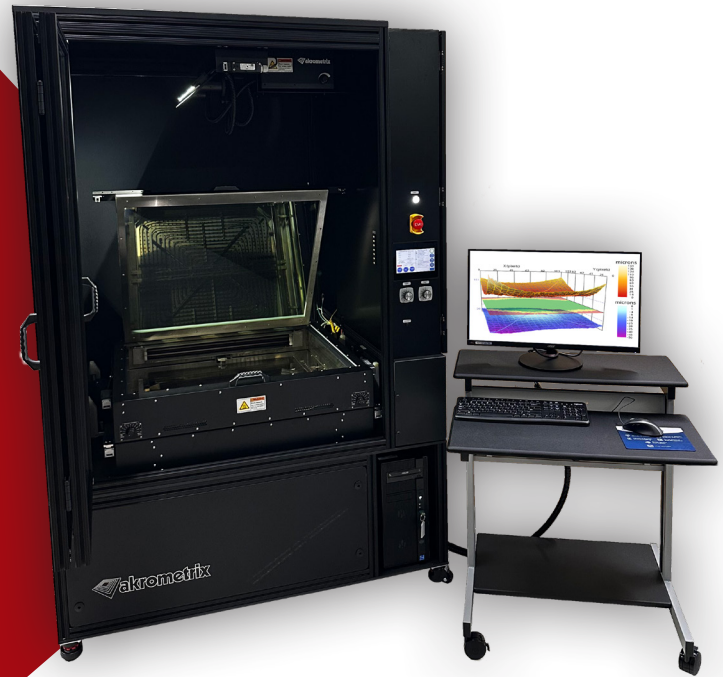
# akrometrix

*Thermal Warpage & Strain Metrology*

## PS600T Thermal Warpage System

### For Fast Thermal Surface Topography

- **Accommodates substrates**  
up to 600mm x 600mm
- **Multi-zone top/bottom heating**  
for realistic reflow emulation
- **With z resolution down to**  
1 micron
- **Field of View Measurement**  
in 2 seconds
- **Optional Capabilities:**
- DFP2
- DIC for CTE Capability

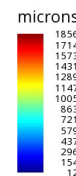
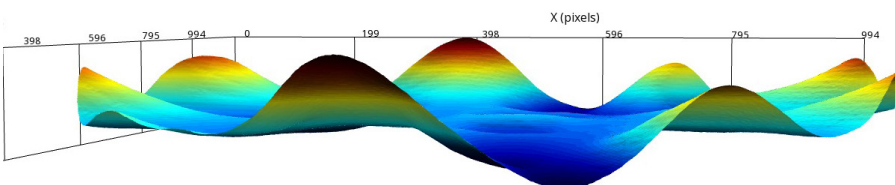
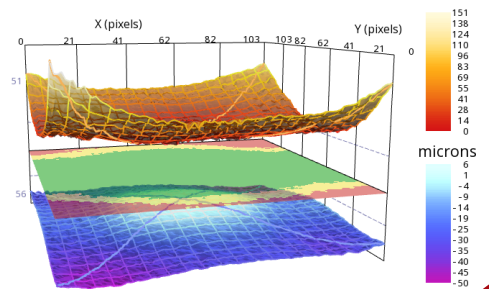
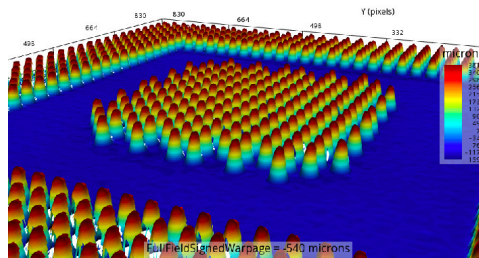
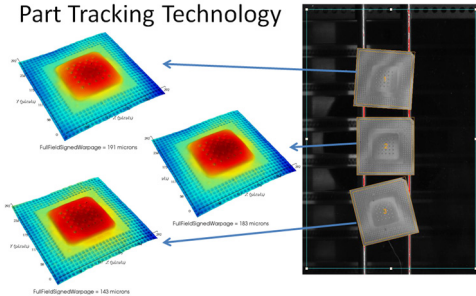


### ON VIRTUALLY ANY SUBSTRATE

- PCBs
- Panels
- Wafers
- Stacked Die
- Individual Die
- Populated Boards
- Wafers on Film Frame
- Components
- Fan out Wafers
- CoWoS



#### Part Tracking Technology



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# PS600T Technical Specifications

|                                                           | w/ Base 100 lpi grating               | w/ Optional 50 lpi grating |
|-----------------------------------------------------------|---------------------------------------|----------------------------|
| Vision Measurement Technology                             | Shadow Moiré                          | Shadow Moiré               |
| Maximum Field of View (FOV) (mm)                          | 600x600                               | 600x600                    |
| Minimum Field of View (FOV) (mm)                          | 365x300                               | 600x600                    |
| Maximum Sample Size (mm) - Heated Area                    | 625x600                               | 625x625                    |
| Maximum Sample Size (mm) - Overall                        | 820x600                               | 820x830                    |
| Minimum Sample Size (mm)                                  | 8x8                                   | 16x16                      |
| Maximum Measured Surface Coplanarity                      | 4,000 microns                         | 16,000 microns             |
| Resolution, Z-axis (vertical displacement)                | 2 microns                             | 4 microns                  |
| Accuracy, Z-axis (vertical displacement)                  | 2.5 microns / 3%                      | 5.0 microns / 3%           |
| Resolution, Z-axis at max FOV (vertical displacement)     | 2 microns                             | 4 microns                  |
| Maximum Measurement Points per Acquisition                | 1,752,000                             | 1,752,000                  |
| Maximum Measurement Density (points per mm <sup>2</sup> ) | 16                                    | 4                          |
| Minimum Measurement Density (points per mm <sup>2</sup> ) | 4                                     | 4                          |
| Thermal Processing Technology                             | Radiant IR                            |                            |
| Maximum Temperature                                       | 300°C                                 |                            |
| Maximum Heating Rate °C/sec (from 50°C to 250°C)*         | 3.5                                   |                            |
| Maximum Cooling Rate °C/sec (from 250°C to 125°C)*        | 1.25                                  |                            |
| Maximum Thermal Profiles                                  | Unlimited                             |                            |
| Maximum Thermal Cycles Time                               | Unlimited                             |                            |
| Maximum Acquisitions per Cycle                            | Unlimited                             |                            |
| Independently Controlled Topside Heating?                 | yes                                   |                            |
| Multi-Zone Bottom Heater?                                 | yes                                   |                            |
| Automated Data Collection?                                | yes                                   |                            |
| Batch Data Analysis?                                      | yes                                   |                            |
| Electronically Controlled Lensing?                        | yes                                   |                            |
| Compatible Modules                                        | DIC2, DFP2                            |                            |
| Software                                                  | Akrometrix Studio                     |                            |
| Data Export Formats                                       | .dat, .txt, .png                      |                            |
| Sample Set-up time, typical                               | 2 minutes                             |                            |
| Sample preparation method, typical                        | none                                  |                            |
| Data Acquisition (Measurement) Time, approximate          | 2 seconds                             |                            |
| Data Analysis Time per Acquisition, approximate           | 2 seconds                             |                            |
| Approximate Depth, Width, Height (mm)                     | 1214x1438x2154                        |                            |
| Approximate Weight (kg)                                   | 735                                   |                            |
| Electrical Requirements                                   | 480VAC, 3 phase, 50/60 Hz, 50A Rating |                            |
| Air Requirements                                          | N/A                                   |                            |
| Other Utilities                                           | exhaust 4000 lpm                      |                            |

\*Thermal Ramp rates based on 27x27x1.4mm substrates sample



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