## Thermal Warpage & Strain Metrology

PS600T
Thermal

Warpage System

## For Fast Thermal Surface Topography

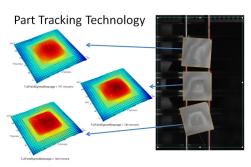
- Accommodates substrates up to 600mm x 600mm
- Multi-zone top/bottom heating for realistic reflow emulation
- With z resolution down to 1 micron
- Field of View Measurement in 2 seconds
- Optional Capabilities:
- DFP2
- DIC for CTE Capability

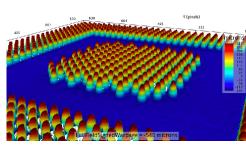


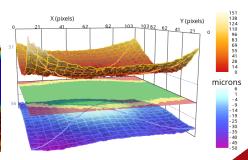


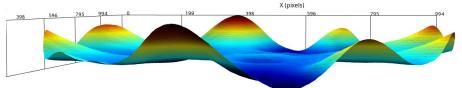
## ON VIRTUALLY ANY SUBSTRATE

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











## **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 mm²)	16	4
Minimum Measurement Density (points per mm²)	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	
Appromixate Depth, Width, Height (mm)	1214x1438x2154	
Appromixate Weight (kg)	735	
Electrical Requirements	480VAC, 1 phase, 50/60 Hz, 50A Rating	
Air Requirements	N/A	
Other Utilities	exhaust 4000 lpm	

<sup>\*</sup>Thermal Ramp rates based on 27x27x1.4mm substrates sample

