

AXP 2.0-DIC Thermal Warpage System

NEW!!! - 2nd Gen. Digital
Image Correlation Thermal
Warpage System

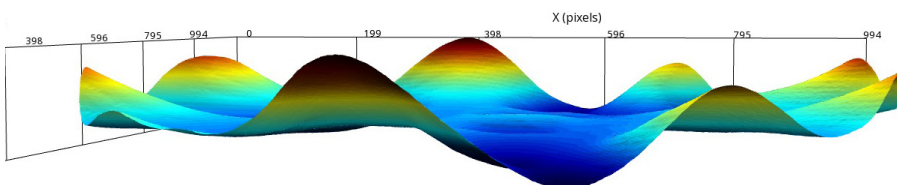
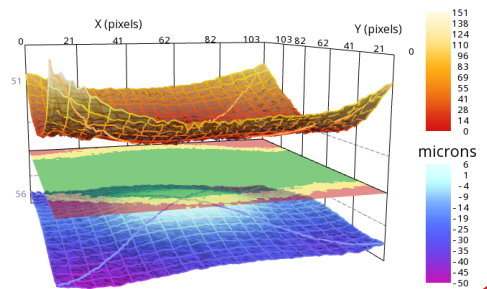
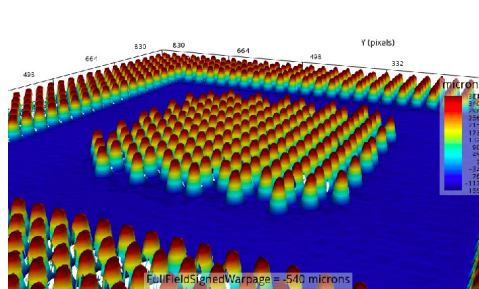
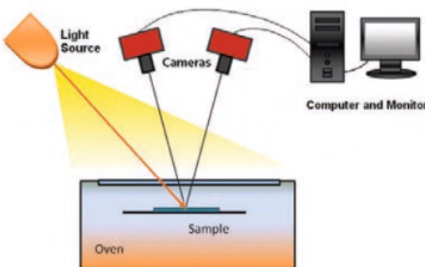
- **AXP 2.0 System** for measuring Coefficient of Thermal Expansion
- **Module Digital Image Correlation** can be added to the AXP 2.0 that allows thermal strain (x,y) measurement of substrates down to 150 microstrain
- **AXP 2.0 System accommodates** products up to 400mm x 400mm, with optional vision technologies
- **Vision Technology:** Digital Image Correlation
- **Runs on Akrometrix Studio** Software



AXP 2.0 SYSTEM CAN MEASURE VIRTUALLY ANY SUBSTRATE

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

Digital Image Correlation Vision Technology



AXP 2.0-DIC Technical Specifications

Vision Measurement Technology	Digital Image Correlation
Maximum Field of View (FOV) (mm)	75x75
Minimum Field of View (FOV) (mm)	75x75
Maximum Sample Size (mm)	400x400
Minimum Sample Size (mm)	5x5
Maximum Measured Surface Coplanarity	within focus range
Resolution, Z-axis (vertical displacement)	1- 2 microns
Accuracy, Z-axis (vertical displacement)	1- 2 microns
Resolution, z-axis at max FOV (vertical displacement)	1- 2 microns
Resolution, XY-axes (horizontal displacement)	0.5 micron
Strain Resolution	100 μ Strain
Maximum Measurement Points per Acquisition	3,549,456
Maximum Measurement Density (points per mm ²)	25**
Minimum Measurement Density (points per mm ²)	25**
Thermal Processing Technology	Radiant IR
Maximum Heating Rate, 50°C to 250°C (°C/s)*	3.5
Maximum Cooling Rate, 250°C to 125°C (°C/sec)*	2.25
Maximum Temperature (°C)	300
Cycle Time 25°C to 250°C to 25°C (minutes)*	8
Maximum Thermal Profiles	Unlimited
Maximum Thermal Cycles Time	Unlimited
Maximum Acquisitions per Cycle	Unlimited
Automated Data Collection	yes
Batch Data Analysis	yes
Software	Akrometrix Studio 8.1 or later
Data Export Formats	.csv, .bmp, .png, .avi
Sample Set-up time, typical	10 minutes
Sample preparation method, typical	black/white paint
Data Acquisition (Measurement) Time, approximate	1 second
Data Analysis Time per Acquisition, approximate	5 seconds
Appromixate Length, Width, Height (mm)	630 x 340 x 360
Appromixate Weight (kg)	a
Electrical Requirements	powered by AXP
Air Requirements	minimum 20 psi
Other Utilities	exhaust 14286 lpm

** Based on a subset of 21 pixels and a step of 5 pixels

