



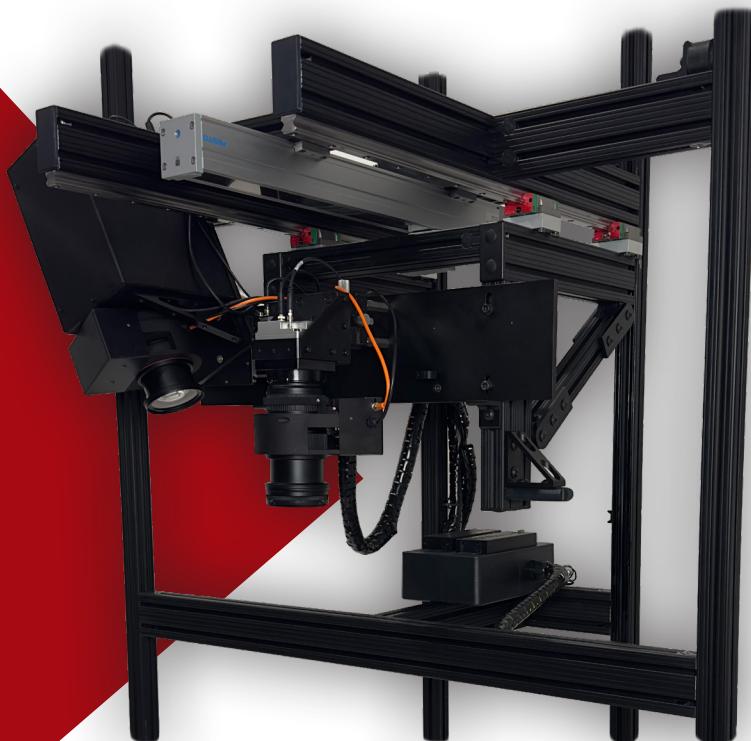
akrometrix
Thermal Warpage & Strain Metrology

DFP3

Digital Fringe Projection Module

For Thermal Topography
on Discontinuous Surfaces

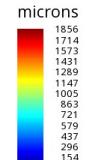
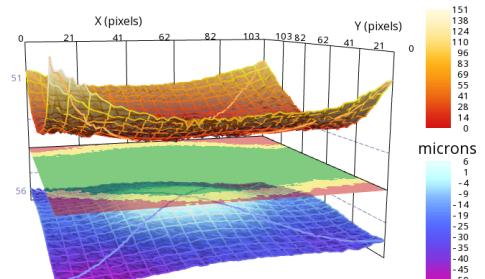
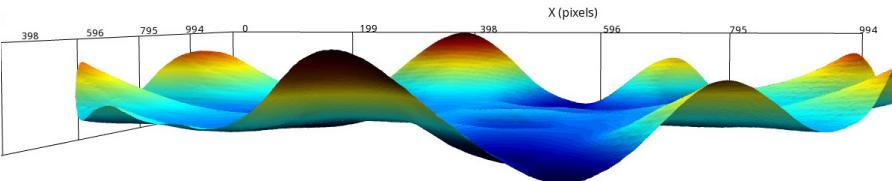
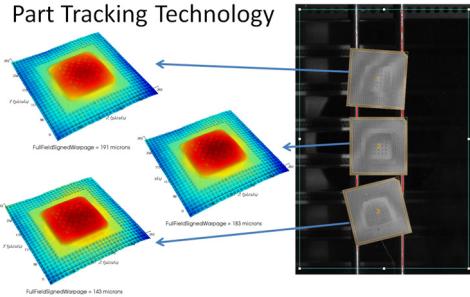
- **Add-on module compatible with**
AXP3 & PS600T
- **Field of View Measurement**
up to 240mm x 192mm in 2 second
- **With resolutions down to**
1.5 microns
- **Setup automation with:**
- Software lens control
- Module Autoloader



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



DFP3 Technical Specifications

| | AXP 3 | PS600T |
|---|-------------------|---------------------------------|
| Vision Measurement Technology | | Digital Fringe Projection |
| Maximum Field of View (FOV) (mm) | | 240x192 |
| Minimum Field of View (FOV) (mm) | | 47.5x38 |
| Maximum Sample Size (mm) - Overall | 400x400 | 820x830 |
| Minimum Sample Size (mm) | | 0.5x0.5 |
| Maximum Measured Surface Coplanarity | | 50,000 microns |
| Resolution, Z-axis (vertical displacement) | | 1.5 microns |
| Accuracy, Z-axis (vertical displacement) | | 2.5 microns / 3% |
| Resolution, Z-axis at max FOV (vertical displacement) | | 3 microns |
| Maximum Measurement Points per Acquisition | | 16,056,320 |
| Maximum Measurement Density (points per mm ²) | | 8895 |
| Minimum Measurement Density (points per mm ²) | | 348 |
| 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)* | 2.25 | 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 |
| Software | | Akrometrix Studio 10.1 or later |
| Data Export Formats | | .dat, .txt, .png |
| Sample Set-up time, typical | | 4 minutes |
| Sample preparation method, typical | | optional |
| Data Acquisition (Measurement) Time, approximate | | 2 seconds |
| Data Analysis Time per Acquisition, approximate | | 16 seconds |
| Appromixate Depth, Width, Height (mm)** | 1564x1335x1780 | 1754x1483x2193 |
| Appromixate Weight (kg) | 161 | 170 |
| Electrical Requirements | | powered by base system |
| Other Utilities | exhaust 14286 lpm | exhaust 4000 lpm |

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

** System dimensions with DFP3 module installed



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