The FINEPLACER® pico ama is a cost effective, fully-automated bonder, offering a high level of application flexibility.

This award winning system is targeted for low volume production environments, as well as product and process development where flexibility is crucial.

**Highlights**

- Placement accuracy 5 µm @ 3 sigma
- Components from 0.125 mm x 0.125 mm to 40 mm x 50 mm
- Working area up to 450 mm x 117 mm
- Supports wafer/substrate sizes up to 8”
- Supports bonding forces up to 50 N
- Closed loop force control
- Fully automatic operation and assembly process
- Precise non-wearing xy planar table
- Traceability support with open data interface structure
- Flexible, cost effective performance
Features

- Automated pattern recognition, alignment and bonding
- Overlay vision alignment system with fixed beam splitter
- Integrated Process Management (IPM)
- Adaptive process library
- Live process observation camera
- Virtually unlimited range of advanced bonding technologies

Benefits

- Full automatic, user independent process
- Outstanding placement accuracy and instant operation without adjustments
- Synchronized control of all process related parameters: force, temperature, time, power, process environment, light and vision
- Fast and easy process development
- Immediate visual feedback reduces process development time
- ROI savings - one machine for all applications

Technologies

- Thermocompression bonding
- Thermosonic bonding
- Ultrasonic bonding
- Soldering (AuSn / eutectic, Indium, C4)
- Adhesive technologies
- UV curing / thermal curing
- Mechanical assembly
- Optical assembly

Applications

- Flip chip bonding (face down)
- Precise die bonding (face up)
- Laser diode, laser diode bar bonding
- Optical engines, VCSEL/ photo diode bonding
- LED bonding
- Micro optics assembly
- MEMS/ MOEMS/ sensor packaging
- 3D packaging
- Wafer level packaging (W2W, C2W)
- Chip on glass, chip on flex

Technical Specifications

- Placement accuracy: 5 µm @ 3 sigma
- Field of view (min): 2 mm x 1.5 mm
- Field of view (max): 14 mm x 10.5 mm
- Component size (min): 0.125 mm x 0.125 mm
- Component size (max): 40 mm x 25 mm
- Theta fine travel: ± 6° / 1 m°
- Z- travel / resolution: 10 mm / 0.8 µm
- Y- travel / resolution: 155 mm / 0.64 µm
- X- travel / resolution: 380 mm / 0.64 µm
- Working area: 380 mm x 117 mm
- Bonding force range: 0.2 N - 50 N
- Heating temp. (max): 400 °C

Modules & Options

- Bonding Force Module
- Chip Heating Module
- Die Flip Module
- Dispenser Module
- Formic Acid Module
- Optics Shifting
- Process Gas Module
- Process Video Module
- Substrate Handling Module
- Substrate Heating Module
- Ultrasonic Module
- UV Curing Module

Notes:

* depending on configuration/ application, (1) standard value, other values on request, (2) optional modules
Technical information are subject to change without prior notice.

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