



FINEPLACER® pico ma

Multi- purpose Die Bonder



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The FINEPLACER® pico ma, a multi- purpose bonder, offers high placement accuracy (5 micron), allowing for bonding of the smallest die with a pitch of down to 50 μm .

This versatile platform is used in a wide field of micro assembly applications – such as flip chip and die bonding.

Designed for prototyping or low- volume production, R&D and universities.

Highlights

- Placement accuracy 5 μm *
- Components from 0.125 mm x 0.125 mm to 100 mm x 100 mm*
- Working area up to 450 mm x 234 mm*
- Supports wafer/ substrate sizes* up to 8" *
- Supports bonding forces up to 400 N*
- Can be configured as a hot air rework system
- Manual and semi- automatic configurations

* depending on configuration and application

Features

- Automated processes
- Overlay vision alignment system (VAS) with fixed beam splitter
- Integrated Process Management (IPM)
- Real time process observation camera
- Advanced system software with adaptive process library
- Process transfer from system to system
- Process flexibility due to modular concept

Benefits

- Hands- off die placement, user independent process operation
- Outstanding placement accuracy and instant operation without adjustments
- Synchronized control of all process related parameters: force, temperature, time, power, process environment, light and vision
- Immediate visual feedback reduces process development time
- Fast and easy process development, process recording and reporting, photo capture
- Process transfer from R&D to production saves time, guarantees reliable results
- One system handles a wide variety of applications

Technologies

- Thermocompression
- Thermosonic
- Ultrasonic
- Soldering (AuSn, C4, Indium, eutectic)
- Adhesive technologies
- Curing (UV, thermal)
- Mechanical assembly

Applications

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

Technical Specifications

Placement accuracy:	5 µm
Field of view (min) ¹ :	1.6 mm x 1.2 mm
Field of view (max) ¹ :	20 mm x 15 mm
Component size (min) ¹ :	0.125 mm x 0.125 mm
Component size (max) ¹ :	40 mm x 40 mm
Theta fine travel:	± 6°
Z- travel	10 mm
Working area ¹ :	280 mm x 117 mm
Heating temp. (max) ^{1,2*} :	400 °C
Bonding force (max) ^{1,2*} :	400 N

Modules & Options

- ACF Module
- Bonding Force Module (manual)
- Bonding Force Module (automatic)
- Chip Heating Module
- Die Flip Module
- Die Pick- up Module
- Dispenser Module
- Formic Acid Module
- Optics Shifting
- Process Gas Module
- Process Video Module
- Scrubbing Module
- Substrate Heating Module
- Ultrasonic Module
- UV Curing Module