finetech

FINEPLACER® lambda 2

Sub-Micron Bonder

The Ultimate Tool for Opto Assemblies

- Sub-micron placement accuracy
- Superior optical resolution
- Excellent price-performance ratio

Numerous bonding technologies (adhesive, soldering, thermocompression, ultrasonic)

Data / media logging and reporting function

Full process access & easy visual programming with touch screen interface

Wide range of controlled bonding forces

Manual or semi-automatic machine versions

Individual configurations with process modules

Revision: 2.3.1

Features / Benefits

Features	Benefits
Various bonding technologies in one recipe	Real flexibility to implement new technology approaches
Unique FINEPLACER® working principle	Simply accurate component placement. Low maintenance technology ensures highest reliability in operation
Overlay vision alignment system (VAS) with fixed beam splitter	Precise visual alignment of chip and substrate
In-situ process observation in HD	Immediate visual process feedback for fast and easy process quality verification
Synchronized control of all process related parameters	Maximum process control and reproducibility
Modular machine platform allows in-field retrofitting during entire service life	Fast and easy upgrade of the bonding platform to meet new application & technology requirements
Process module compatibility across Finetech platforms	Transfer of qualified process parameters between systems
Sequence control with predefined parameters	Get your process steps in the right order of an intuitive and guided process flow

Technologies

» Sintering
» Thermocompression bonding
» Thermo-/ultrasonic bonding
» Soldering/eutectic soldering
» Adhesive bonding

Processes

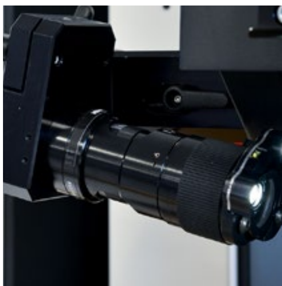
» Flip chip bonding (face down)
» Precision die bonding (face up)
» 2.5D and 3D IC packaging (stacking)
» Chip on Glass (CoG)
» Chip on Flex/Film (CoF)
» Glass on glass

Applications

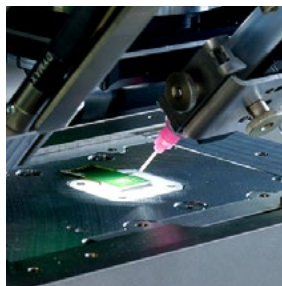
» Laser diode assembly
» Laser diode bar assembly
» VCSEL/photo diode (array) assembly
» Lens (array) assembly
» Micro optics assembly
» Micro-optical bench assembly
» Optical Sub Assembly (TOSA/ROSA)
» Visual image sensor assembly
» µLED (array) assembly
» Generic MOEMS assembly
» Generic MEMS assembly
» Gas pressure sensor assembly
» Acceleration sensor assembly

Modules & Options

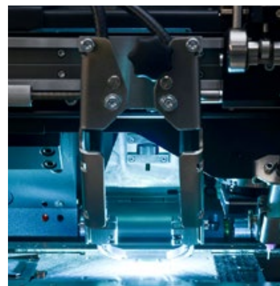
- » Bonding Force Module (automatic)
- » Bonding Force Module (manual)
- » Camera Y-Shift Module
- » Chip Heating Module
- » Component Presentation
- » Die Flip Module
- » Dispense Module
- » Dual-Camera Optics
- » Formic Acid Module
- » Form Generator
- » Gap Adjustment Module
- » High resolution optic
- » Manual Dipping Unit
- » Process Gas Module
- » Process Gas Selection
- » Process Video Module
- » Substrate Heating Module
- » Substrate Support
- » Tool Tip Changer
- » Ultrasonic Module
- » UV Curing Module



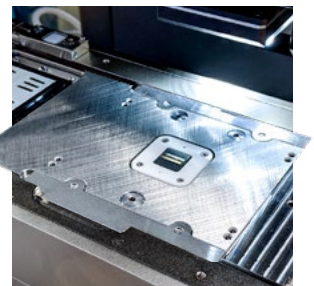
Process Video Module



Dispense Module



UV Curing Module



Substrate Heating Module

Accuracy
0.5µm
10µm

Component
min. 0.03mm x 0.03mm
max. 20mm x 20mm

Substrate
150mm x 150mm

Force*
0.1N
400N

Operation
manual
semi automatic
automatic

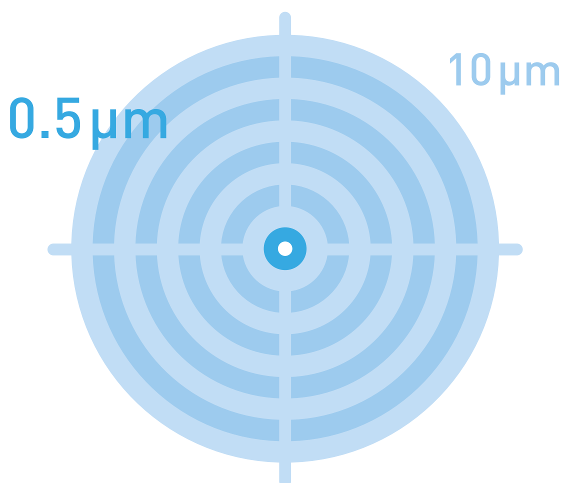
Seamless Process Transfer from R&D to Production

How many of your promising product ideas got lost on the way from development to series production? Could you not follow through because of your die bonder's technological restrictions or the uncertain return on invest? Did you get stuck trying to automate your prototyping processes according to production requirements?

With Finetech's "Prototype-to-Production" approach, you ensure 1:1 process transfer from R&D to production while maintaining full technological freedom, allowing for short time-to-market with minimized financial risks.

Download the paper here:

How We Understand Accuracy

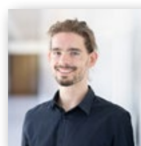


For assembly systems in packaging technology, so-called die bonders, the specified placement accuracy is an essential key figure for classification. However, it is often not clear which accuracy is meant and how or when it is measured. Therefore, Finetech relies on a transparent and verifiable method description of how the accuracy of our placement and assembly systems is measured and specified. This technical paper explains the context as well as the influencing factors of accuracy and shows which conclusions the customers can draw for themselves from the specified accuracy of Finetech products, but also those of other manufacturers.

Download the paper here:

Customer Feedback

"We use the FINEPLACER® lambda 2 for development processes on MEMS, e.g. for precise dispensing and the placement of microstructures. The system fits in with the investment strategy at ISS, where flexible facilities with a wide range of materials enable research into new materials and, in particular, rapid prototyping."



Severin Schweiger
Fraunhofer IPMS, Integrated Silicon Systems

Technical information and specifications are subject to change without prior notice
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