finetech

FINEPLACER® femto^blu

Automatic Multi-Purpose Bonder

The Efficient Solution for Opto Production

- Multi-chip capability
- Numerous bonding technologies (adhesive, soldering, ultrasonic, thermocompression)

Modular machine platform allows in-field retrofitting during entire service life

Wide range of component presentation (wafer, waffle pack, gel-pak®)

Dual-camera system for alignment

Large bonding area

Placement accuracy of 2 µm @ 3 Sigma

Ultra low bonding force

Features	Benefits
Various bonding technologies in one recipe	Real flexibility to implement new technology approaches
Wide range of supported component sizes	One bonding plattform supports a broad spectrum of applications
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
Full process access and easy programming	Flexible and intuitive process composition allows implementing complex applications with little training effort
Data/media logging and reporting function	Comprehensive process documentation and traceability of process parameters for analysis
Synchronized control of all process related parameters	Maximum process control and reproducibility
Integrated scrubbing function	Void reduction and improved surface wetting condition for optimized soldering quality
Fully automatic and manual operation	Fully manual mode available for fast and easy R&D work without any programming
Excellent price performance ratio	High accuracy and process flexibility over the entire service life enable endless possibilities to bring your vision to life

Technologies

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

Processes

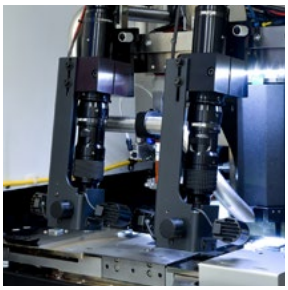
» Flip chip bonding (face down)
» Precision die bonding (face up)
» Wafer level packaging (FOWLP, W2W, C2W)
» 2.5D and 3D IC packaging (stacking)
» Multi chip packaging (MCM, MCP)
» Chip on glass (CoG)
» Chip on flex/ film (CoF)
» Glass on glass
» Flex on board
» Chip on board (CoB)

Applications

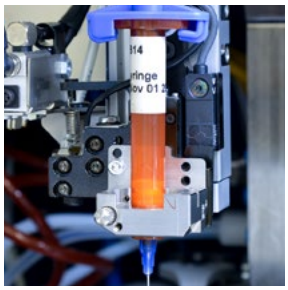
» Laser diode assembly
» Laser diode bar assembly
» Lens (array) assembly
» High-power laser module assembly
» Optical Sub Assembly (TOSA/ROSA)
» VCSEL/photo diode (array) assembly
» Generic MEMS assembly
» Micro optics assembly
» Single Photon detector assembly
» Gas pressure sensor assembly
» Acceleration sensor assembly
» Ultrasonic transceiver assembly
» NFC device packaging
» Mechanical assembly

Modules & Options

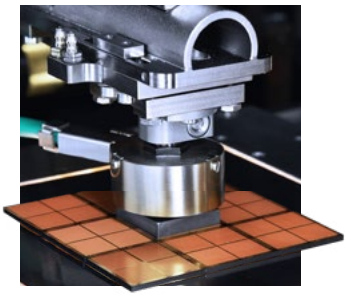
» Automatic Dipping Unit
» Automatic Tool Changer
» Chip Heating Module
» Component Presentation
» Die Eject Module
» Die Flip Module
» Dispense Module
» Flip Chip Test Module
» Formic Acid Module
» Handling Module
» HEPA-Filter
» Height Sensor (Laser)
» ID Code Reader
» Laser Activation Module
» Laser Bottom Heater
» Manual Dipping Unit
» Optics Shifting
» Process Gas Module
» Process Gas Selection
» Substrate Heating Module
» Substrate Support
» Ultrasonic Module
» UV Curing Module



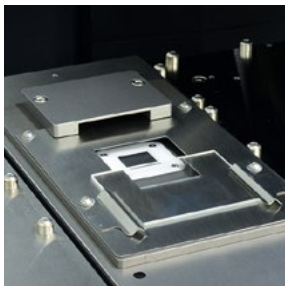
Live process observation



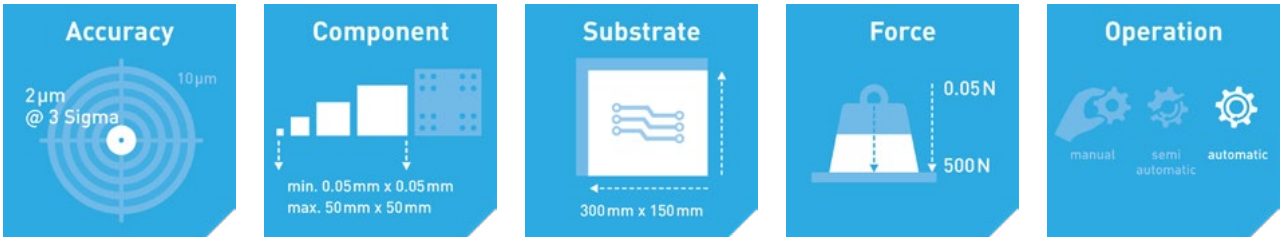
Dispense Module



Chip Heating Module



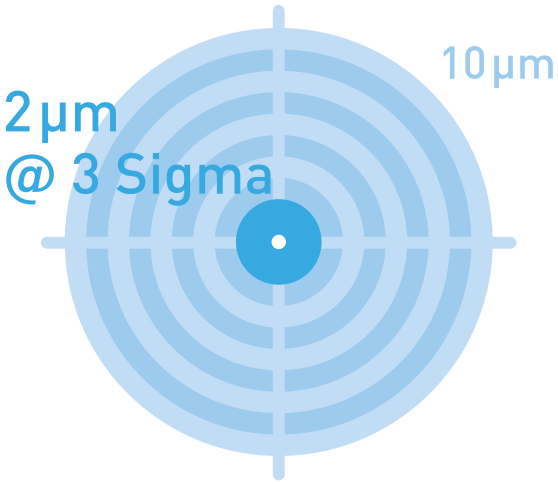
Substrate Heating Module

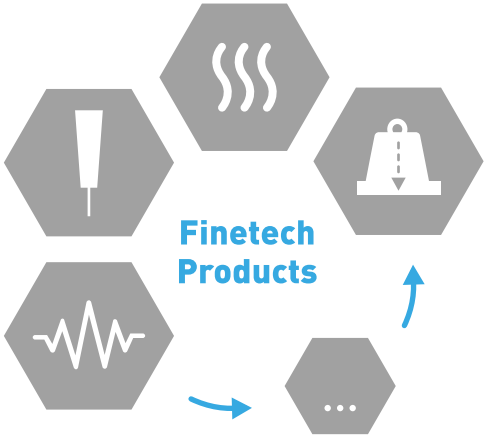


How We Understand Accuracy

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:





Modularity Pays Off

Due to a large number of available process and function modules, the FINEPLACER® supports a particularly wide range of applications. When starting out, this flexibility enables configurations tailored exactly to the current needs. Moreover, the system can be adapted to new tasks over its entire service life, which is an integral part of the machine concept. Modules can be easily combined or exchanged, which increases the flexibility of the system and safeguards the investment in the long term.

Customer Feedback

"We use a Finetech die bonder for complex flip chip, sensor and opto-electronics applications, along with co-development of new assembly processes for leading semiconductor customers. The bonder has allowed us to help customers develop, optimize, verify and enhance many state-of-the-art technologies."

Dhiraj Bora
CEO & President, Silitronics