

Fully Automatic Die Bonder HM-IM

Integrated Equipment for Micro-Assembly of Optical Modules & Chips

Core Performance

High-resolution imaging up to 0.5 μm

Cost-effective performance

Complete after-sales technical support



Optional Interchangeable Nozzle Modules

- (Dispensing, Dipping, Eutectic Bonding, Thermal Compression, Die Bonding, Ultrasonic Bonding)
- Vertical closed-loop real-time visual inspection system
- Wide adjustable range for closed-loop bonding pressure control
- Storable parameter & image recipe files, customizable report generation
- Multiple optional modules & custom configuration for diversified applications
- Multi-segment high-precision temperature curve programming available

Application Scenarios

- Micro-component assembly
- Chip bonding & mounting
- Laser diode bonding
- Photodiode packaging
- Laser bar bonding
- Mini LED rework & bonding
- High-end component assembly
- Packaging & bonding of advanced chips

Supported Processes

1. Pulsed bottom heating platform for eutectic soldering
2. High-frequency top heating thermal compression bonding (AuSn, solder preform, etc.)
3. Glue dispensing & dipping (UV adhesive, curing glue, silver paste, various industrial adhesives)
4. UV ultraviolet curing
5. Multi-directional face-to-face bonding (flip-chip mounting & bonding)

Key Features

1. Closed-loop vision positioning system with positioning accuracy of $\pm 0.5 \mu\text{m}$
2. Modular & highly integrated design; optional modules for complex processes & working conditions
3. Substrate stages and chip pick-up nozzles compatible with wide size ranges, minimizing frequent replacement
4. Ultra-high precision and long-term operational stability
5. Real-time visual monitoring of entire process; intuitive, user-friendly operation interface

Standard & Optional Configurable Modules

- Vacuum & pneumatic system
- Precision pressure control gauge
- Ultrasonic thermal compression bonding module
- Top heating nozzle assembly
- Dispensing module controller
- Side dispensing module
- Constant temperature controller
- Pulse heating controller
- Optical imaging system
- Industrial control computer
- UV ultraviolet curing unit
- XYZ fine-tuning fixture
- High-precision marble working platform
- Side-view inspection camera assembly
- Anti-vibration machine frame
- Inert gas protection system



Blue tape
automatic wafer
feeding



High-precision
CCD alignment



Z-axis closed-loop
pressure system



Data record
export



Pulse
temperature
control system



Real-time product
traceability

Precision



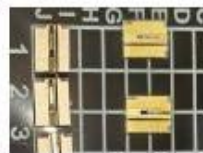
0.5 μ m

Chip size range



0.25mm~40mm

Substrate size range



0.5mm~140mm

Bonding pressure
range



0.01N~500N