

Product Features

- Single-step solder ball placement and reflow
- Flux-free reflow with laser
- No special tooling required
- No additional reflow required
- Solder-ball diameter from 40µm to 760µm
- High solder alloy flexibility
 - Eutectic SnPb
 - High-lead SnPb
 - Lead-free SnAg, SnAgCu, etc.
 - AuSn
 - InSn
 - SnBi
- In-line capability
- High throughput
- High accuracy axis system
- Automated fiducial alignment
- Ball rework and repair capability
- Option configurations
 - 2D bump-inspection systems
 - Integrated laser power sensor
 - Solder rework & reballing station
 - Automatic handling/robot system
 - Reel-to-reel (300-400mm or 35-70mm)

Applications

- HDD (HGA, HSA, Hook-Up)
- Flip-chip, BGAs, cLCC's, CSPs
- 3D packaging
- 4- to 12-inch wafers
- Repair/rework of BGA-like packages
- Optoelectronics/Microoptics
- MEMS
- Camera modules
- Wafer bumping

SB²

Laser Solder Jetting Systems

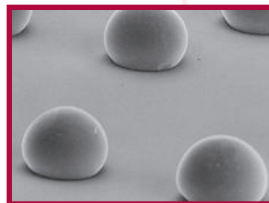


Solder ball placement systems within the semiconductor industry have reached a new standard for advanced and reliable solder ball placement, reflow and rework. The high-speed SB² systems can achieve a ball placement rate up to 10 balls per second. They provide an exceptional solution for economical solder ball, reflow and repair.

SB² systems provide reproducible solder bumping technology for packaging optoelectronic devices, hard disk drives (HGA, HSA), MEMS, sensors, camera modules, BGA's, chip-scale packaging and flip-chips. They are available in three configurations: fully automatic (SB²-Jet), semiautomatic (SB²-SM) and small foot print (SB²-M).

SB² systems have the ability to singulate, to position and to reflow solder balls with diameters of 40µm to 760µm. They are designed for water bumping, single-chip bumping and selective solder deposition on substrates (FR4, ceramic, flex materials). They are suitable for wafer or substrates sizes up to 300mm. They also allow a flexible method of solder ball placement on chip-scale packages (CSP) and ball-grid arrays (BGA). One of the major applications is for 3D interconnections such as chip-on-flex, stacked 3D modules and HGA's.

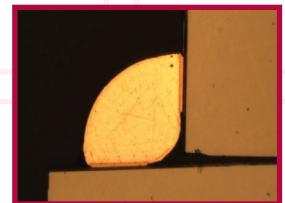
Solder ball reflow is performed by a laser system using an infrared wavelength. All components of the system are integrated into a single cabinet.



Ball Placement



Solder Balling for optoelectronics/MEMS



3D Laser Vertical Chip Bonding

