

SL / SSL Series

Advanced Semiconductor Micro Dispensing Platform

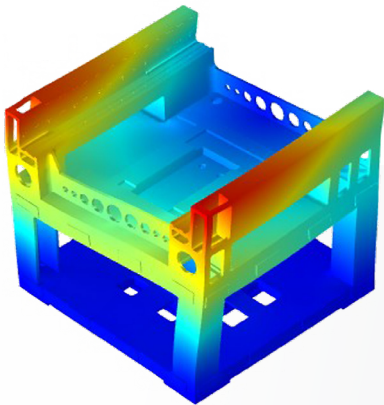
FOR SIP / WAFER LEVEL UNDERFILL /
EXTREME FINE SILVER PASTE DISPENSING /
NARROW GAP FILLING

SL / SSL series are specifically designed for semiconductor micro fluid packaging applications for narrow gap filling, fine line dispensing and micro underfill with small machine footprint.

SL / SSL has outstanding performance of motion route repeatability and accuracy, capable of precisely filling silver epoxy into 170µm narrow gap as well as precisely dispensing 0.2nl material in total volume along the dispensing route regardless of line, square, circle or any other shapes.

SL / SSL series are designed to accept up to 12" wafer.

SSL has similar features as SL except higher acceleration up to 2.5G for higher throughput.



(Simulation analysis schematic)



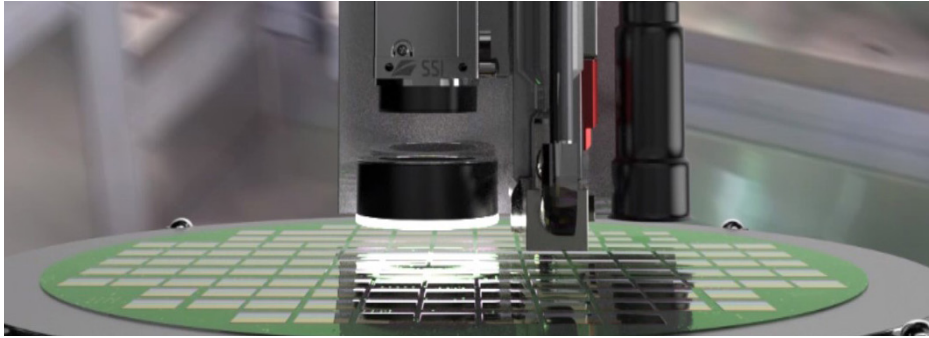
(SL series)



(SSL series)

HIGH PRECISION HARDWARE SPECIFICATIONS

SL / SSL series come with a special machine base and gantry engineered to meet the highest repeatability accuracy of $\pm 1\mu\text{m}$ and position accuracy of $\pm 2\mu\text{m}$.



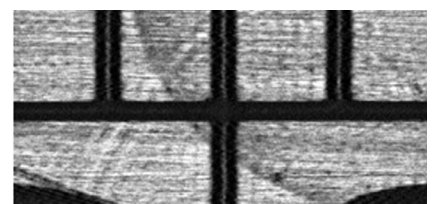
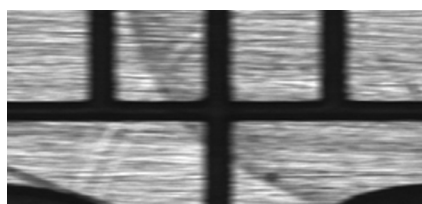
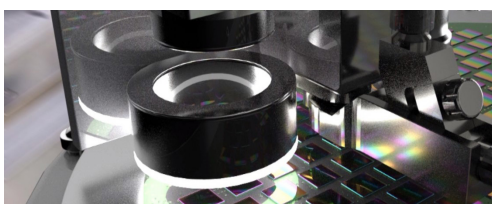
VERSATILE DISPENSING APPLICATORS FOR ALL PRECISION APPLICATIONS

- Piezo jet valve for high speed jetting
- Progressive Cavity Pump(PCP) for precision high viscosity contact dispensing
- Deposition pump for < 100µm dispensing
- Solder paste jetting valve
- Thin film ultrasonic spray coater
- 10:1 high precision mixing and dispensing
- High precision air spray coater

ADVANCED DISPENSING VISION SOFTWARE WITH MOTION CONTROL

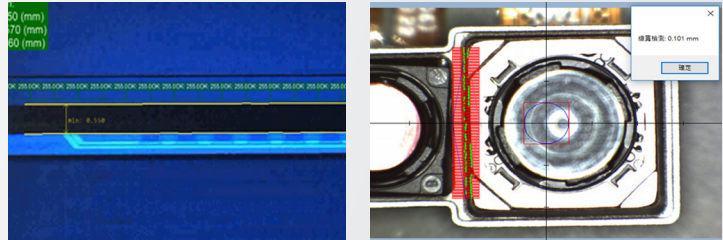
K&S advanced dispensing vision software integrates motion control and vision alignment with the following features :

- **Support SECS / GEM and mapping requirements**
- **Close loop flow volume control**
- **Quick process parameters setting**
- **Effective dispensing delay time control**
- **Stream motion**
- **Real time dispensing height measurement and compensation**
- **Fiducial on fly**
- **Remote teaching**



POST DISPENSING AUTOMATIC OPTICAL INSPECTION

SL / SSL series provide post dispensing inspection. Our glue inspection system is uniquely designed and has the capability to provide high and accurate detection rate. The SL series customized vision inspection can assure 98-99% detection rate. Options for conveyor with tray, cassette, magazine, wafer cassette or FOUP are available.



SL Series Robot Specifications :

- X-Y-Z Max Travel: 500mm x 700mm x 100mm
- X-Y Dispensing Area: 400mm x 500mm x 100mm
- Dimensions: 900mm(W) x 1704mm(D) x 1750mm(H)
- Robot Weight: 1800 kg
- XYZ Speed(mm/sec): 500, 500, 250mm/sec
- XYZ Acceleration(mm/sec²): 0.25G, 0.25G, 0.25G
- Repeatability(XYZ ±μm @3Sigma): 1, 1, 3
- Position Accuracy(XYZ ±μm @3Sigma): 2, 2, 6
- Resolution(XYZ μm): 0.1, 0.1, 0.1

SSL Series Robot Specifications :

- X-Y-Z Max Travel: 410mm x 640mm x 40mm
- X-Y Dispensing Area: 320mm x 350mm x 40mm
- Dimensions: 700mm(W) x 1760mm(D) x 1657mm(H)
- Robot Weight: 1100 kg
- XYZ Speed(mm/sec): 1500, 1500, 50mm/sec
- XYZ Acceleration(mm/sec²): 1.5G, 1.5G, 0.25G
- Repeatability(XYZ ±μm @3Sigma): 1, 1, 3
- Position Accuracy(XYZ ±μm @3Sigma): 2, 2, 6
- Resolution(XYZ μm): 0.1, 0.1, 0.1

