



Small production line for LED products assembling

The line is designed for manufacturing of LED lamps of different modifications.

Line capacity: **15 000 CPH**

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This line is designed specially for beginning manufacturers of LED lighting systems. Special nature of LED systems production is the necessity to have high speed equipment for various LEDs and minimal set of SMD components.

The line is based on architecture of a standard line for SMD component assembly, but the equipment is modified specially for work with LEDs.

The line works with FR4 PCBs as well as with aluminum PCBs up to 510 x 460 mm.

The oven length allows working with long aluminum PCBs (with high heat capacity) according to temperature profile recommended by LED vendor, without decreasing of operation time for the rest of the line.

Special vacuum nozzles are used for placing LEDs on PCBs; they are designed to avoid damage of their silicone lens. These nozzles are made of non-adhesive materials to avoid sticking of lens.

The unique ability of the line is work with LEDs in bulk; that could lower the cost of purchased components as well as the final cost of the product.

Line specification	Vendor	Model
PCB loader to line	SJ Inno tech	SLD-120X
Solder paste screen printer	SJ Inno tech	HP-520S
SMD pick-and place system	Mirae	Mx-200LED
Visual check work table	SJ Inno tech	SWT-900X
Solder paste reflow oven	TSM	A70-j93
PCB unloader from line	SJ Inno tech	SUD-120X



Surface Mount Technology



Options list:

For SMD pick-and-place system

- Classic reel tape feeders (C-Feeder) for tape 8 – 88 mm
- High-speed reel tape feeders (eX-Feeder) for tape 8 – 88 mm
- Stick feeder for 6 sticks
- Automatic bulk feeder (LSM2)
- Manual tray holder for IC in JEDEC pallets
- Option of conveyer extension for PCBs up to 1,200 mm length

For solder paste printer

- Pneumatic support pins
- Automatic adding of solder paste
- Microclimate support system

For solder paste reflow oven

- Thermal profiler to control temperature at PCB surface
- Oven modification for nitrogen atmosphere soldering is possible

Line specification:

- PCB size: from 50 x 50 mm up to 510 x 460 mm
- Speed according to IPC-9850: 15,000 CPH for LEDs and chip components
- Components: from 0201 up to 18 x 18 mm (or 24 x 18 mm for connectors), max. height of component 10 mm
- Quantity of 8 mm feeders: 50 ea.
- Component placing precision: $\pm 50 \mu\text{m}$ (at 3σ)
- Solder paste application control: 2D vision system
- Oven: 9 heating zones, 3 cooling zone

