

PSS CHIP Series

Low temperature CHIP Automatic Test System



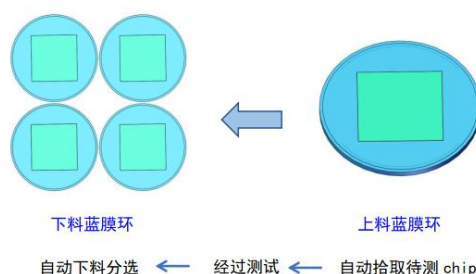
Product Introduction

The system is used for low-temperature LIV test, SMSR test and backlight sampling test of optical chip LD-CHIP, and classifies and files different test results. Chip wafer blue film loading, CHIP-ID automatic identification memory matching test, through the blue film thimble stripping mechanism, suction nozzle sucking, the manipulator transports the CHIP to the high temperature and normal temperature test area, automatic positioning, automatic testing, analysis and screening, finally manipulator handling and classification.

This system has the characteristics of high speed and high precision, can realize the process of complex timing and strict logic. The equipment adopts mechanisms such as eccentric cam drive, connecting rods and precision fixtures, and cooperates with technologies such as multi-axis motion, visual positioning, and visual character matching, has mass production testing capability.

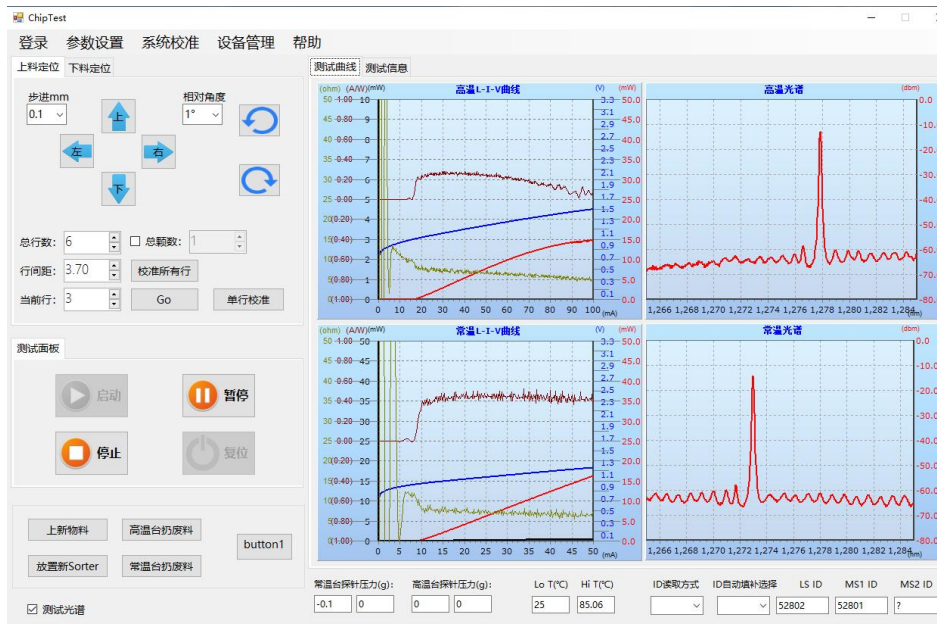
Product Application

- The equipment is used for automatic test binning of bare chips, which can realize spectrum and LIV parameter testing of edge-emitting chips under low temperature conditions.

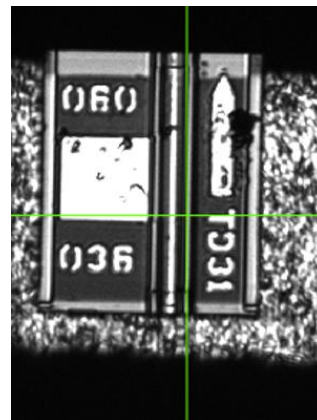
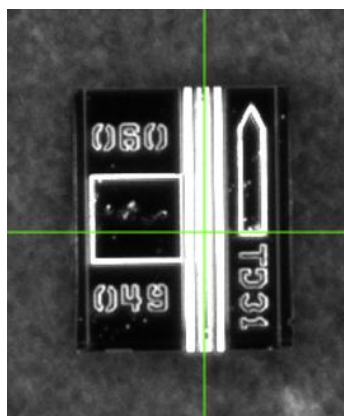


Product Features

- Support Chip's LIV and spectral related parameters test, and test curves drawing.



- Automatic loading of the chip blue film, automatic recognition of the chip ID through the vision system. The test bench supports the automatic secondary positioning of the chip under the camera, and precisely controls the power-on test of the probe.

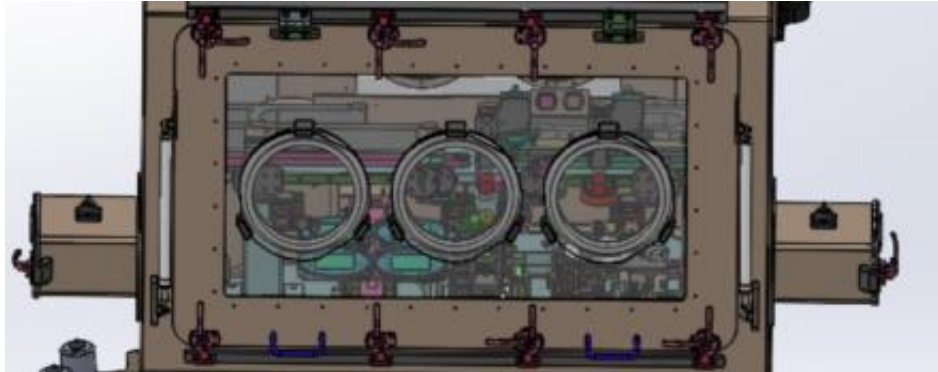


Loading camera focusing

Low-temperature table camera focusing

- The probe automatically presses down and powers, the probe's pressure force is adjustable, and real-time display of the probe force is supported.

- Low temperature test bench, with TEC temperature control, has good stability, temperature control range is +25°C ~ -45°C, accuracy $\pm 0.4^{\circ}\text{C}$
- The cabin is sealed, nitrogen or dry air is replaced to achieve a low dew point environment; use anti-static gloves to operate materials, and transfer cabins to transfer materials.



- For abnormal situations in the production process, there are alarm prompts and error correction prompts;
- The material in contact with the chip adopts anti-static material and grounding treatment, equipped with a static elimination ion fan;
- Support local and remote databases;
- Multi-dimensional adjustable measurement structure to meet the needs of users for chip measurement of different specifications;
- Standard TO and chip can be used for calibration, and other process parameters can be set;
- For important links in the production process, there are real-time dynamic prompts;
- Software supports local and remote databases.

Technical Parameters

Parameters	Description/Value
Chip Size supported	Chip length 200-300μm; Chip width 150-300μm For other sizes, test table can be customized
Feed size	6 inch blue film ring, there are 4 places for blue film ring in the feeding area, with automatic binning function
Test table	Low-temperature test table, which realizes loading, position calibration and testing in parallel.
Test parameters	LIV curve, Ith, Po, Vf, Im, Rs, SE, Kink, Spectral parameters, etc
LD drive current	Range 0-250mA, maximum 500mA can be customized, support pulse output
Forward voltage test	Range 0-5V
Optical power test	Test range 0-30mW; Wavelength range 900-1700nm (Subject to the spectrometer)
Temperature control	Low temperature: -40C (25~-40adjustable) Stability ≤ ±1°C
Test efficiency (typical)	Single Chip ≤ 6s (Single Spectral Point Test, AQ6360D)
Power supply	AC 220V/32A 50Hz