

## Solar Module EL Tester

Mode:GEL-830

(EL detector 8.3 Megapixels)



Manufacture:JiangSu Keyland Laser Technology Co.,LTD

Mainly Used:

To detect Solar panel whether have crack、broken、Virtual welding、break grid、 and with other different conversion efficiency Solar cell.

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Two、 Technical Specification

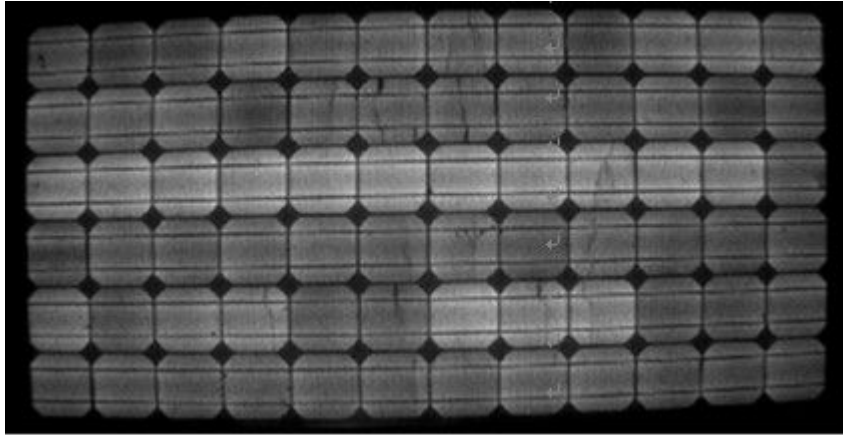
Three、 Equipment Characteristics

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**One、 Equipment Picture**



## 1.Module defects Picture (Single Camera)



## Two、 Technique Specification

### 1. Specification:

#### 1.1 Camera Dark Room (Aluminium Alloy Sections、 aluminum composite panel)

- Aluminium Alloy Sections: stable and light
- Double-Deck aluminum composite panel: Prevent outside light to enter Dark Room

#### 1.2 Capture Mode:

- A. optional: 830W

#### 1.3 monitoring position:

- a. Before laminate
- b. After laminate

#### 1.4 Camera

- a. Camera Model: QHY9
- b. CCD Chip: Sony
- c. Camera Type: CCD with TE Cooler
- d. Cooling temperature:  $-10^{\circ}\text{C}$
- e. Resolution: 3448H\*2574V (830W)
- f. Capture Time: 1—60s
- g. zoom lens
- h. Optical filter
- i. Can detect the crack width less than 0.2  $\mu\text{m}$
- j. Light intensity range:  $200\text{W}/\text{m}^2 \sim 1200\text{W}/\text{m}^2$

#### 1.5 Pneumatic component

- a. Inductive Switch: SMC(Japan)
- b. Cylinder stator: SMC(Japan)
- c. Electromagnetic valve: SMC(Japan)
- d. Reducing valve: SMC(Japan)
- e. Air tube: SAMTAM(Japan)



### 1.7 Power supply

- a. Voltage range: 0-60V
- b. Current range: 0-10A

### 1.8 Module specification

- a. Module size: Max:2150X1150 (Special size can be separately designed)
- b. Voltage: 46—100V
- c. Current: 7—8A
- d. Temperature: -10℃—40℃
- e. Overall size: 2900X1900X1680

1.9 Test parameter: Target、Gain、Time、Gamma、Contrast、Data wide。

## Three、Equipment Characteristics

1. The whole machine equipment excellent performance
  - 1.1 Unique technology to ensure that equipment more stable performance, efficiency is higher.
  - 1.2. High Test speed.
  - 1.3. 24-hour uninterrupted job.
  - 1.4. Reasonable structure, convenient installation maintenance and concise.
  - 1.5. The reasonable allocation systems and components, each part and the play best benefit.
  - 1.6. Control panel humanized design, easy operation procedure.
  - 1.7. Component face up.

## 2. Judging defect classification

Welding spots	Crack	Current not match	Current Cell Process	Virtual welding	Cell contaminate
OK	OK	OK	OK	OK	OK

## Four、Software

- 3.1, according to industry special design features, friendly man-machine interface, easy to operate.
- 3.2, unique photo inquires function.
- 3.3, automatic scan the bar code Numbers, Numbers name as the file name to be saved, automatic control constant current source, automatic classification save; Double click enlarge graphic display function, display fine features, convenience judgment.
- 3.4, flexible setup qualified criterion function, can be set to black piece, broken gate, debris, and degree of defects such as number; Automatic statistical defects types, quantities, and automatically set up text documents preservation.