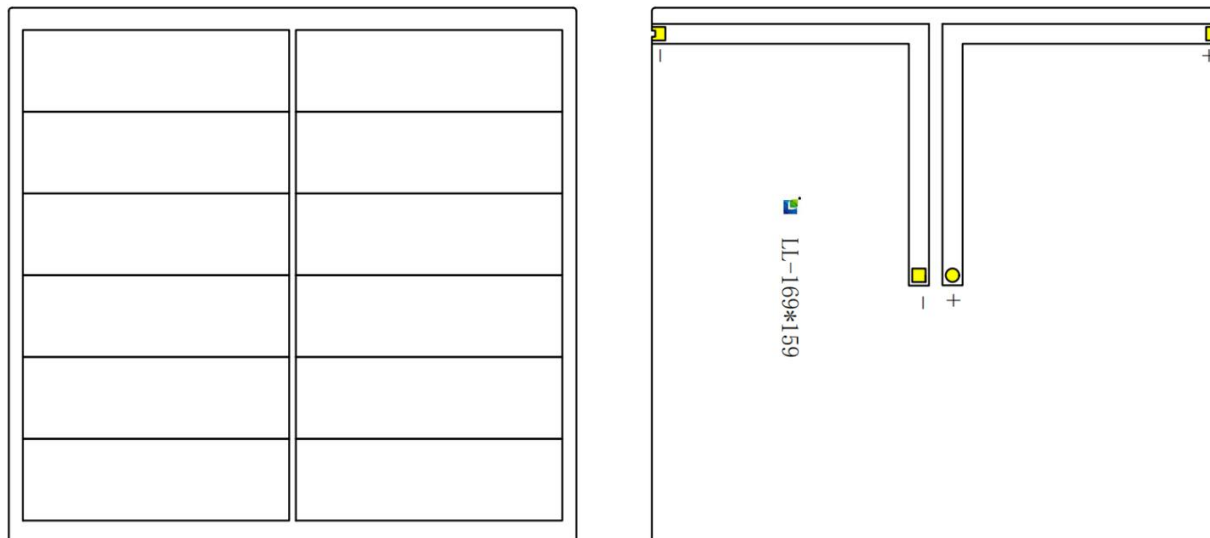


Specification

VIS-ISMART505S

5W Solar Panel

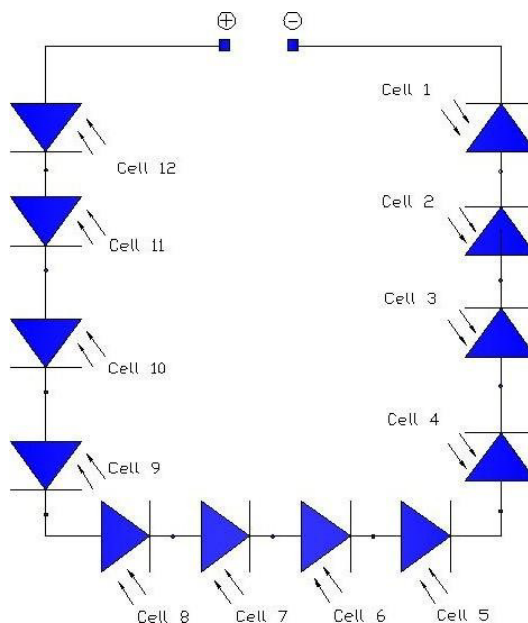
1. Appearance of solar panels



Front and back appearance of the bare solar panel (as shown in the figure).

2. Working mode of solar panel

Solar panel working mode: 12 pieces in series. Working principle of solar panel (as shown in the following figure):



3. Solar panel electrical parameters

Minimum output power (@STC)	5 W	±5%
The open circuit voltage (@STC)	7.2 V	±5%

Standard operating voltage (@STC)	6.0 V	±5%
Standard operating current (@STC)	830 mA	±5%
Short circuit current (@STC)	900 mA	±5%
Cell conversion efficiency (%)	≥20%	

4. Electrical performance parameters of finished product with stable pressure plate

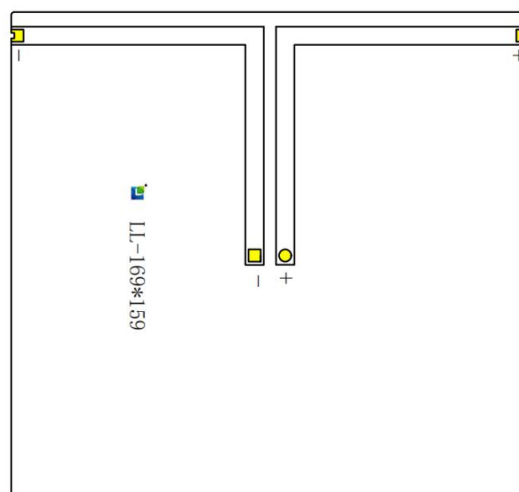
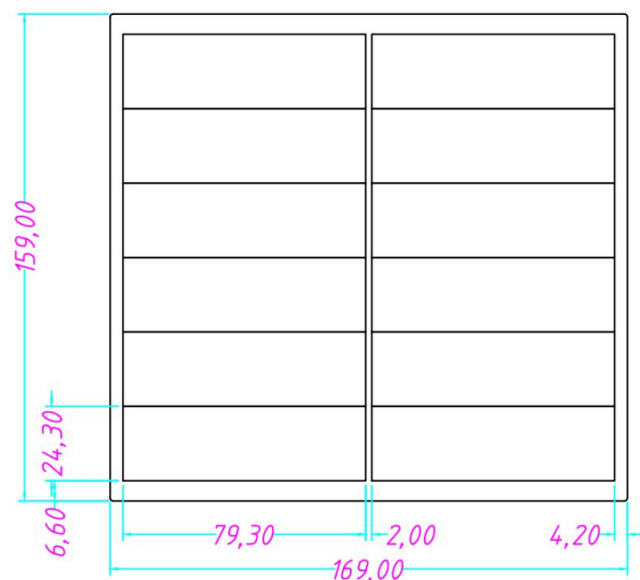
The output power (@STC)	≥4.6W
Standard operating voltage (@STC)	≥4.5V
Standard operating current (@STC)	≥1.02A

Note: STC = standard test conditions → AM1.5, 25°C, 1000W/m², SMQ + 12%

5. Dimensions of bare solar panels (cutting process: machine cutting)

Length of solar panel	169 ± 0.25 mm
Width of solar panel	159 ± 0.25 mm
Solar panel thickness	2.50 ± 0.3 mm
Solar panel deformation	≤1 mm

6. Dimensions & Specifications



7. Solar panel composition & material thickness

Solar panel composition materials	PCB board, welding tape, solar cell, EVA, black tape, rubber shell, wire
PCB	1.2 mm glass fiber
Welding with	1.6 x 0.12 mm
Solar cell sheet	0.18 mm thick, 158 single imbricated solar cells
EVA	0.45 mm, 0.45 mm
ETFE	0.02 mm
Black tape	4.0 x 185 mm
Plastic shell	173.8 x 163.8 x 14.7 mm
Wire	TYPE-C head or Micro USB 5P round head are available. Exposed part length ≥ 2.9 m, PVC material, wire diameter (13/0.15BC) *2C

8. Packaging mode & surface effect

8.1 Package mode: glass fiber bottom plate + EVA + ETFE laminate package

8.2 Solar panel surface effect: smooth ETFE (as shown in the following picture):



8.3 The control board is filled with silica gel to ensure waterproofing (as shown in the following picture):



9. Standard method & operating environment for testing the electrical properties of solar cells

- 9.1 After the solar panel is laminated, it is mainly tested for its working power.
- 9.2 Solar radiation intensity: 1000W/m² or customer sample
- 9.3 Temperature: 25 °C
- 9.4 Humidity: 10 ~ 90 %
- 9.5 Atmospheric quality: AM 1.5
- 9.6 Load tester indicates the power of a bare board load test.

10. Working power test

- 10.1 Emphasize the light until the customer signs the sample for dimming.
- 10.2 Use electronic load meter with stable pressure plate and line test, output power $\geq 4.6W$ is qualified.
- 10.3 The light intensity is corrected every 2 hours.

11. Environmental conditions for use & storage

- 11.1 Storage condition: normal temperature, humidity not more than 60%.
- 11.2 Use in open outdoor environment under sunlight
- 11.3 Operating temperature: -20°C to 60°C
- 11.4 Temperature of soldering iron: 360±10°C
- 11.5 Spot welding time shall not exceed 3 seconds, and the interval of multiple spot welding shall not be less than 30 seconds.
- 11.6 Dustproof and waterproof grade of solar panels: IP65