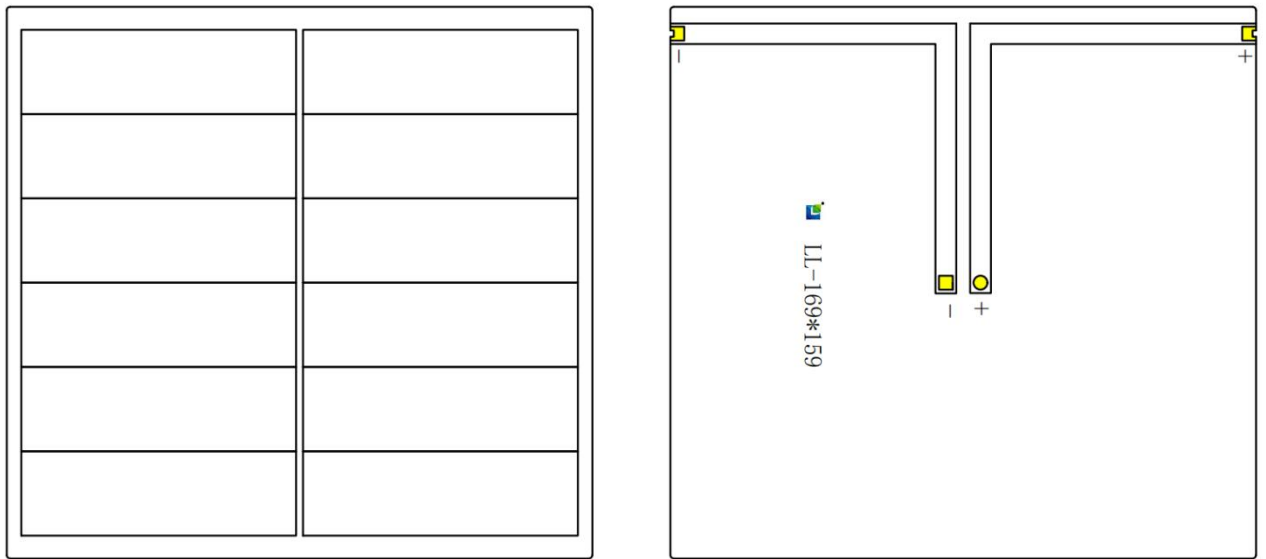


SP2

Specifications

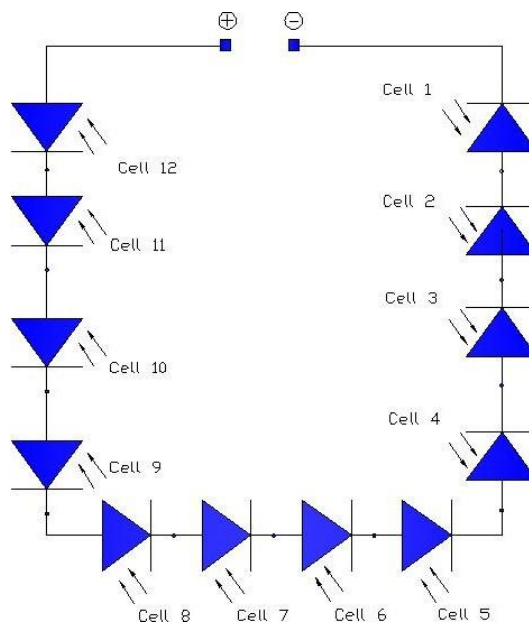
1. Front and back renderings of the Solar panel: (Figure 1-1)



(The rendering of the front and back of the bare Solar panel)

2. How Solar panels work: (Figure 2-1)

How the Solar panel works: 12 pieces are series circuit connection.



(Figure 2-1) Schematic

3. Solar panel parameters

Bare board electrical performance parameters

Minimum output power (@STC) $\geq 4.5\text{W}$

Open circuit voltage (@STC): $\geq 7.361\text{V}$

Standard operating voltage (@STC): $\geq 6.2\text{V}$

Standard operating current (@STC): $\geq 725\text{mA}$

Short circuit current (@STC): $\geq 748\text{mA}$

Cell conversion efficiency (%): $\geq 20\%$

Note: STC: Standard Tested Condition: AM=1.5, 25°C, 1000W/m², SMQ+12%

4. Dimensions of bare Solar panels (Cutting process: Machine cutting)

1. Solar panel length: 169±0.25mm

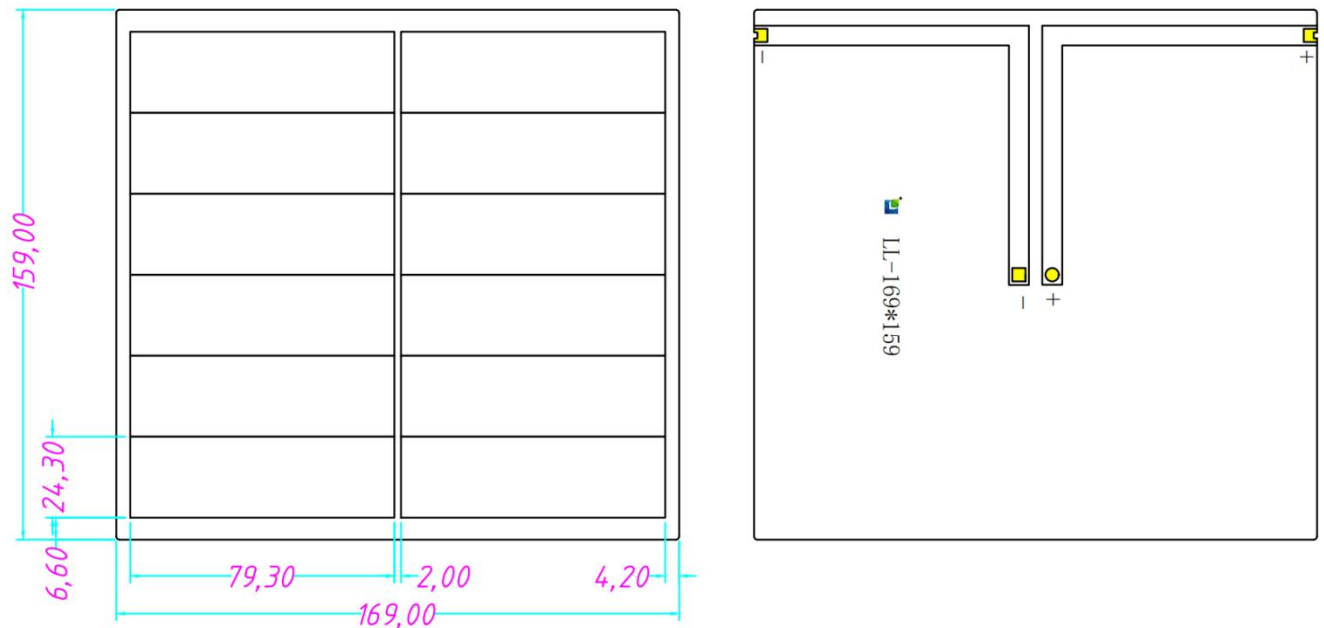
2. Solar panel width: 159±0.25mm

3. Solar panel thickness: 2.9±0.2mm, confirm that the overall appearance size is slightly lower than the shell surface

4. Deformation of Solar panel: $\leq 1\text{mm}$

Dimensions (Figure 4-1)

(Fig. 4-1) Specification and dimension drawing



5. Solar panel composition and material thickness

Solar panel composition materials: PCB board, welding tape, Solar cell, EVA, ETFE, black tape, plastic shell, wire

PCB: 1.2mm glass fiber

Ribbon: 1.5*0.12mm

Solar cells: 0.18mm thick, 158 single shingled Solar cells

EVA: 0.45mm, 0.45mm

PET: 0.2mm

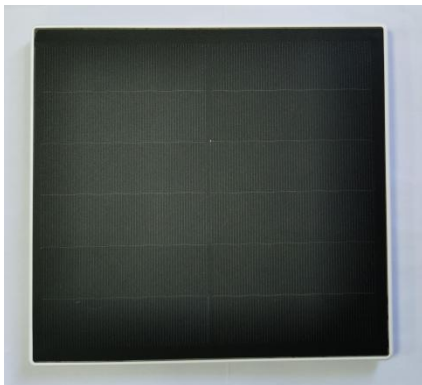
Black tape: 4.0*185mm

Plastic shell: 173.8*163.8*14.7mm

Wire: 3m Android wire

6. Packaging method and surface effect:

1. Packaging method: glass fiber base plate + PET laminated packaging.
2. Solar panel surface effect: frosted surface. (As shown below)



7. Warranty period:

1. Component warranty: 1 year.

8. Standard method and use environment for electrical performance testing of Solar cells

1. After the Solar panels are laminated, they are mainly tested for working power.
2. Solar radiation intensity: 1000W/square meter or customer signed sample.
3. Temperature: 25°C.
4. Humidity: 10 ~ 90%.
5. Air quality: AM1.5.
6. The power value of the bare board load test using a load tester.

9. Working power test

1. Adjust the light intensity to the customer's signature sample dimming
2. Use electronic load meter, test with line, when the load is 12.5Ω, the output power $\geq 4.2W$ is qualified
3. Correct the light intensity every 2 hours

10. Environmental conditions for use and storage

1. Storage conditions: normal temperature, humidity not more than 60%.
2. Use in an unobstructed outdoor environment under the sun
3. Working temperature: -20°C~60°C
4. Soldering iron temperature: 360±10°C
5. The spot welding time is not more than 3 seconds, and the interval time of multiple spot welding is not less than 30 seconds.
6. Dustproof and waterproof rating of Solar panel: IP65

11. Appearance inspection requirements

Description: During the appearance inspection, the handheld product is parallel to the line of sight, the line of sight is 30 cm, the inclination is 45 degrees, and the left and right deflection is 15 degrees. If no obvious defects are found within 5 seconds, it is qualified.

Code description: L: Length W: Width H: Height D: Distance N: Quantity ⊙: Diameter

1. The same product has no obvious color difference under indoor lighting;
2. The silicon wafers are arranged neatly;
3. Wafer chipping and missing corners: $L \leq 1.5mm$ $W \leq 0.5mm$ $N \leq 1$;
4. Stain on the surface of silicon wafer: $\odot \leq 1.5mm$ $N \leq 2$;
5. Scratches: $L \leq 5mm$;
6. No obvious bright spots: $W \leq 0.3mm$ $N \leq 2$;
7. The cell gap is dirty, the spot area: $\odot \leq 0.5mm$ $N \leq 2$;
8. Tin slag, bubbles and foreign matter in the glue: $\odot \leq 1mm$ $N \leq 2$;
9. Visual identification, laser cutting process, the tolerance range of length and width is $\pm 0.25mm$, and the unilateral gap is less than or equal to 0.5mm.

In case of disputes over the above standards, the limits confirmed by both parties shall prevail

12. Packaging method

1. Each Solar panel is packed in a foam bag;
2. Shipment finished product: including a set of brackets (bracket arm, bracket base, fastening nut), a screw bag (3 screws + 3 hoses), a Solar panel with a cable (Android interface), and a box ;
3. Shipping and packing: to be determined;