

# Solar And Renewable Power System



## Solar Power

### 320 W - 350 W

Mono-Crystalline Photovoltaic Module



Positive power tolerance  
0~+4.99 watt



Withstand strong front  
load 5400 Pa / rear Load 2400 Pa



100% EL inline inspection  
Better module reliability



Ammonia resistance



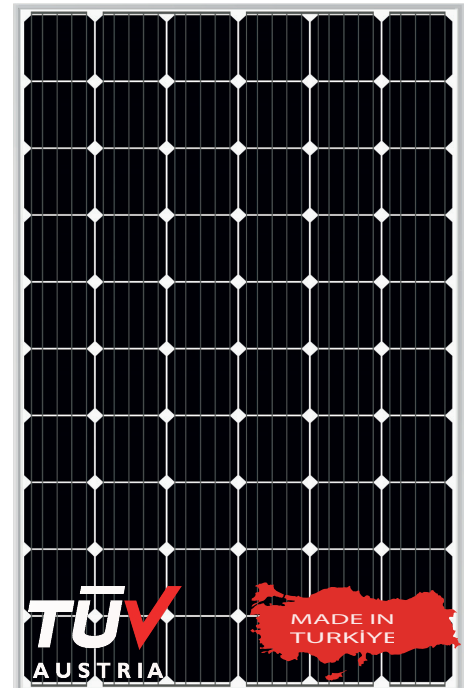
25 years power output warranty



Snail trail resistance



Design for 1500 VDC system voltage  
Reduce the system BOS effectively



Harsh environment PV system installation



Excellent PID Performance

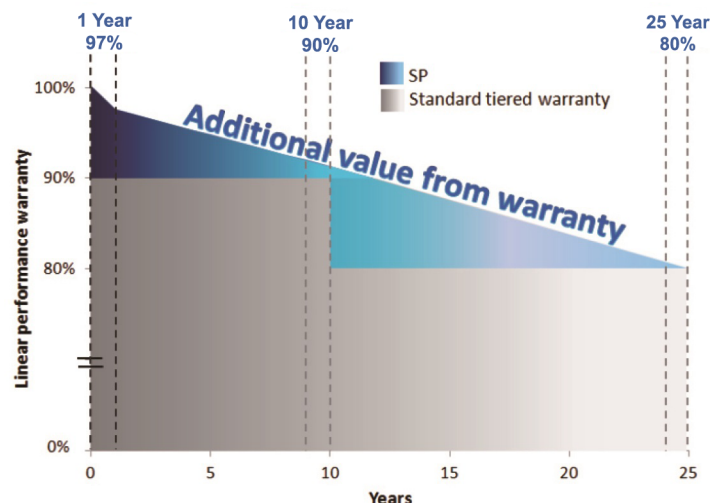
#### Reliability & Certification

Product Guarantee: 10-year

Linear Performance Warranty

- 1-year : 97% power output then  
power degradation 0.5% per year  
till 25<sup>th</sup> year

- 25-year : 85%



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## Electrical Data

| MODEL                        | SP-315M72 | SP-320M72 | SP-325M72 |
|------------------------------|-----------|-----------|-----------|
| Maximum Rating Power (Pmax)  | 315 W     | 320 W     | 325 W     |
| Module Efficiency            | 18.82%    | 19.12%    | 19.42%    |
| Open Circuit Voltage (Voc)   | 39.52 V   | 39.72V    | 39.84 V   |
| Maximum Power Voltage (Vmpp) | 33.42 V   | 33.72 V   | 33.90 V   |
| Short Circuit Current (Isc)  | 9.915 A   | 9.945 A   | 9.970 A   |
| Maximum Power Current (Impp) | 9.497 A   | 9.555 A   | 9.593 A   |

| MODEL                        | SP-330M72 | SP-335M72 | SP-340M72 |
|------------------------------|-----------|-----------|-----------|
| Maximum Rating Power (Pmax)  | 330 W     | 335 W     | 340 W     |
| Module Efficiency            | 19.72%    | 20.01%    | 20.31%    |
| Open Circuit Voltage (Voc)   | 40.02 V   | 41.20 V   | 42.10 V   |
| Maximum Power Voltage (Vmpp) | 34.38 V   | 34.62 V   | 34.95 V   |
| Short Circuit Current (Isc)  | 10.058 A  | 10.12 A   | 10.158 A  |
| Maximum Power Current (Impp) | 9.634 A   | 9.68 A    | 9.73 A    |

\* Standard Test Conditions (STC): Cell Temperature 25°C, Irradiance 1000 W/m<sup>2</sup>, AM 1.5G

\* Values without tolerance are typical numbers

\* Specifications are subject to change without notice

## Mechanical Data

| Item                    | Specification                                                                                                                   |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Dimensions              | 1670 mm (L) <sup>1</sup> x 1002 mm (W) <sup>1</sup> x 35 mm (D) <sup>1</sup> / 65.75" (L) x 39.45" (W) <sup>1</sup> x 1.38" (D) |
| Weight                  | 18.2 kg / 40.12 lbs                                                                                                             |
| Solar Cell              | 60 Monocrystalline PERC Solar Cells                                                                                             |
| Front Glass             | Anti-reflective tempered patterned glass, 3.2 mm                                                                                |
| Cell Encapsulation      | EVA (Ethylene-Vinyl-Acetate)                                                                                                    |
| Rear Glass              | Tempered patterned glass, 3.2 mm                                                                                                |
| Junction Box            | IP 67 rated, 3 Diodes; Cable: 4.0 mm <sup>2</sup> , 1000/1200 mm                                                                |
| Packaging Configuration | 27 pcs per pallet, 810 pcs per 40' HQ container                                                                                 |

<sup>1</sup> : With assembly tolerance of ± 2 mm [± 0.08"]

## Operating Conditions

| Item                   | Specification |
|------------------------|---------------|
| Maximum Front Loading  | 5400 Pa       |
| Maximum System Voltage | 1500VDC (IEC) |
| Series Fuse Rating     | 20A           |
| Operating Temperature  | -40 to 85°C   |

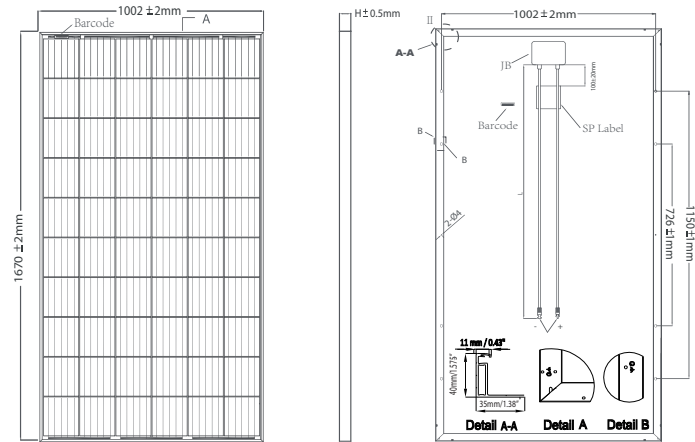
## Temperature Characteristics

| Item                               | Specification |
|------------------------------------|---------------|
| Nominal Operating Cell Temperature | 46 °C ± 2°C   |
| Temperature Coefficient of Isc     | 0,048 % / °C  |
| Temperature Coefficient of Voc     | -0,280 % / °C |
| Temperature Coefficient of Pmax    | -0,370 % / °  |

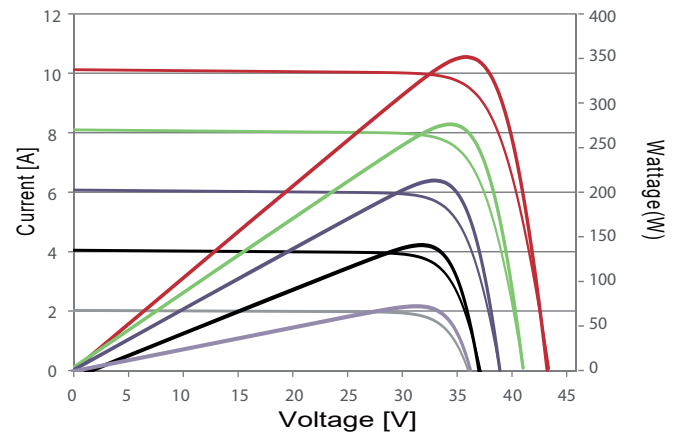
## Certificates

TUV Austria Certification, CE, ISO 9001:2015, ISO 14001: 2015, OHSAS 18"001, FPC Factory Process Control certificate

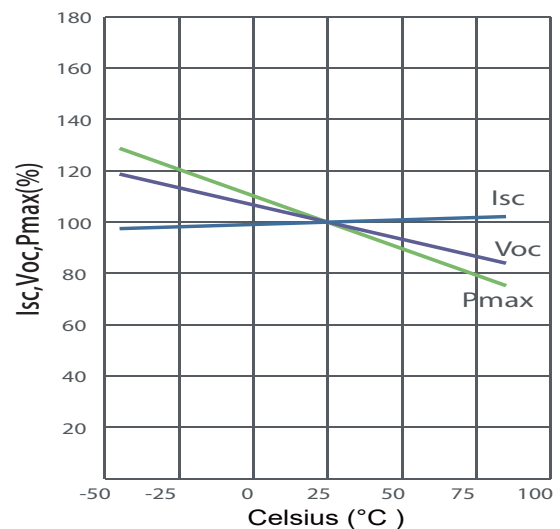
## Front View & Back View



## Dependence on Irradiance



## Dependence on Temperature



\* Nominal Operating Cell Temperature (NOCT):  
Irradiance 800 W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1 m/s  
\* Please refer to SP's Standard Module Installation Manual before using the product  
NOCT 44°C

[www.spenerji.com](http://www.spenerji.com)

## Factory

### Address:

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