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# **EnergyPal**

**Solar Panel Guide  
Specification Data Sheet**

**Solartron Public Co., Ltd.  
SP300W-325W  
SP325**

Also available on the web at  
[EnergyPal.com/solartron-public-co-ltd-solar-panels/sp325](http://EnergyPal.com/solartron-public-co-ltd-solar-panels/sp325)



# SOLARTRON

PUBLIC COMPANY LIMITED

## 300W/305W/310W/315W/320W/325W Multicrystalline Silicon Solar Module



**Module Efficiency is up to 16%**, minimizing installation costs and maximizing the output of the system.

**992.7x1972.7x40mm** is suitable for power plant system .

**Higher Durability**, Certified to withstand 2400 Pa wind load and 5400 Pa snow load.

**Higher Output**, Improved ribbon layout and cable length, Enhanced fill factor, Increased power output up to 1% by reducing power loss.

**Lower Junction Box Temperature**, Separated junction box design, Better heat dissipation, Lower diode operating temperature and life time.

### Warranty

10 years Product Workmanship Warranty

25 years Linear Power Output Warranty:

Output power shall not be less than 97.5% in the first year

Loss shall not exceed 0.7% per year from year 2<sup>nd</sup> to 25<sup>th</sup>

### Standards and Certification

ISO 9001:2015, ISO 14001:2015, TIS 18001:2554 and OHSAS 18001:2007 certified factories

CE Mark (EMC–Directive 2004/108/EC) certificate of European Conformity  
RoHS certified of directive on the restriction of the use of certain hazardous substances

TIS 1843-2553 (IEC61215) Crystalline silicon terrestrial photovoltaic modules, Thai Industrial Standards

TIS 2580-2555 (IEC61730) Photovoltaic module safety qualification, Thai Industrial Standards

TÜV Rheinland IEC61215, IEC61730

JETPVM certification (IEC61215,IEC61730)

MCS – PV0222

UL 1703 by TÜV Rheinland



### Mechanical Characteristics

<b>Solar Cell :</b>	72 Cells, 156x156 multicrystalline	<b>Junction box :</b>	IP67 Certified Junction Box
<b>Dimension :</b>	992.7 x 1972.7 x 40mm	<b>Diodes :</b>	3 Schottky bypass diodes
<b>Weight :</b>	22 kg.	<b>Connector :</b>	MC4 compatible
<b>Construction :</b>	Front: High Transmission 3.2 mm. tempered glass; Rear: White PET; Encapsulant: EVA	<b>Output cables :</b>	4.0 mm <sup>2</sup> 12 AWG cable. Cable length 315 mm
<b>Frame :</b>	Anodized Aluminium Alloy	<b>Fire rating Class :</b>	C

### SOLARTRON PUBLIC COMPANY LIMITED

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## Electrical Characteristics

STC Performance	SP300	SP305	SP310	SP315	SP320	SP325
Rated Power, Pm (W)	300	305	310	315	320	325
Open Circuit Voltage, Voc (V)	44.81	44.99	45.03	45.08	45.29	45.51
Short Circuit Current, Isc (A)	8.94	8.96	9.05	9.14	9.23	9.32
Maximum Power Voltage, Vmp (V)	36.09	36.36	36.71	37.05	37.41	37.76
Maximum Power Current, Imp (A)	8.32	8.39	8.44	8.50	8.55	8.61
Module Efficiency (%)	15.32	15.57	15.83	16.08	16.34	16.60
Maximum Power Tolerance (W)	±3					
Maximum System Voltage, IEC (V)	1000					
Maximum System Voltage, UL (V)	600					
Maximum Series Fuse Rating, (Amp)	15					
Temperature coefficients of Pmax	-0.42 % / °C					
Temperature coefficients of Voc	-0.31 % / °C					
Temperature coefficients of Isc	0.04 %/ °C					
Nominal operating cell temperature (NOCT)	45.0 °C (±2 °C)					

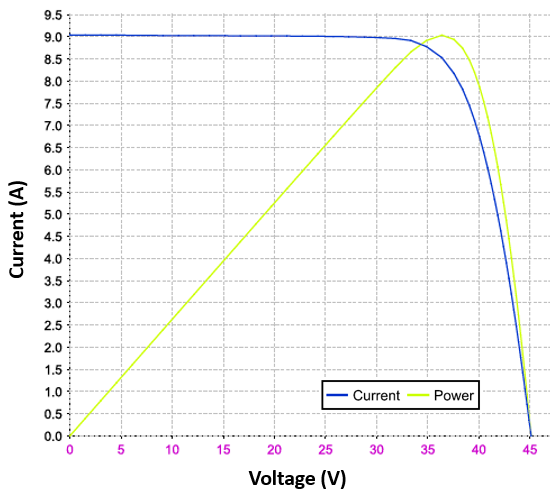
❖ Standard Test Conditions of Irradiance of 1,000 W/m<sup>2</sup>, Spectrum 1.5 AM , Module Temperature 25 °C

❖ Weaklight Performance at 200 W/m<sup>2</sup>: Efficiency of module shall not be less than 95.5% of STC efficiency

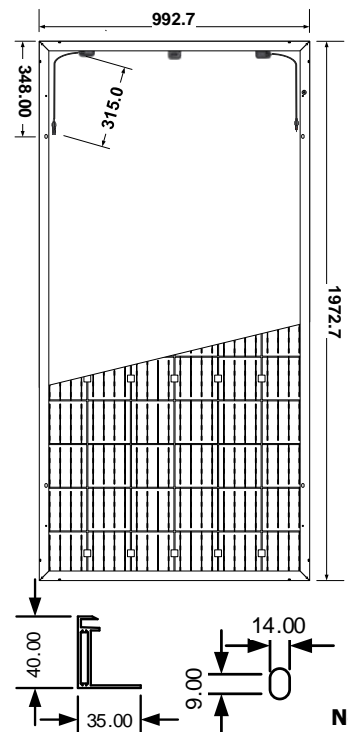
NOCT Performance	SP300	SP305	SP310	SP315	SP320	SP325
Rated Power, Pm (W)	222	226	230	233	237	241
Open Circuit Voltage, Voc (V)	43.14	43.31	43.36	43.40	43.60	43.81
Short Circuit Current, Isc (A)	7.23	7.25	7.34	7.39	7.46	7.54
Maximum Power Voltage, Vmp (V)	33.67	33.92	34.28	34.57	34.90	35.23
Maximum Power Current, Imp (A)	6.61	6.67	6.70	6.75	6.79	6.84

❖ NOCT: Irradiance of 800 W/m<sup>2</sup>, Ambient Temperature 20 °C, Wind Speed 1m/s

### I-V CURVES OF PV MODULE



### DIMENSION OF PV MODULE



Note : mm

### Packaging Configuration

Modules per box	25 pieces
Container 20' HC	250 pieces
Container 40' HC	600 pieces