

545 Solar Panel

PS545W#BPVPS

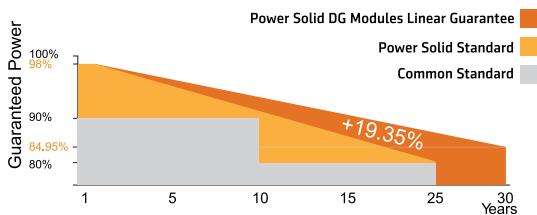
10BB HALF-CELL Bifacial Double Glass Monocrystalline PERC PV Module

21.48%

MAXIMUM EFFICIENCY

0.45%

YEARLY DEGRADATION



*Please check the valid version of Limited Product Warranty which is officially released by Power Solid

Key Features



Excellent Cells Efficiency

MBB technology reduce the distance between busbars and finger grid line which is benefit to power increase.



Better Weak Illumination Response

More power output in weak light condition, such as haze, cloudy, and early morning.



Anti PID

Ensured PID resistance through the quality control of cell manufacturing process and raw materials.



Adapt To Harsh Outdoor Environment

Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity environment.



TIER 1

Global, Tier 1 bankable brand, with independently certified advanced automated manufacturing.



Excellent Quality Management System

Warranted reliability and stringent quality assurances well beyond certified requirements.



Bifacial Technology

Up to 25% additional power gain from back side depending on albedo.

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10BB HALF-CELL Bifacial
Double Glass Monocrystalline PERC PV Module



Barcode 1

Drainage holes
16-8x3

Mounting holes
4-14x9

Mounting holes
4-10x7

Barcode 2

Junction box

Label

Grounding identification

Grounding holes
4-Ø4

1088 ± 2

1134 ± 2

1500

400

2279 ± 2

30

32

A-A
12:1

30

18

B-B
12:1

Front View

Back View

*Remark: customized frame color and cable length available upon request

Figure 1 is a line graph showing the current-voltage (I-V) characteristics of a solar cell at a constant temperature of 25 °C. The y-axis represents Current [A], ranging from 0 to 16. The x-axis represents Voltage [V], ranging from 0 to 60. Five curves are plotted, corresponding to different incident irradiances: 1000 W/m² (red), 800 W/m² (green), 600 W/m² (purple), 400 W/m² (blue), and 200 W/m² (grey). The curves show that as the incident irradiance decreases, the short-circuit current (at 0 V) decreases, while the open-circuit voltage (at 0 A) remains relatively constant around 50 V. The maximum power point (MPP) shifts to lower voltages and currents as irradiance decreases.

Incident Irrad. [W/m²]	Short-Circuit Current [A] (at 0 V)	Open-Circuit Voltage [V] (at 0 A)	Approx. MPP Voltage [V]	Approx. MPP Current [A]
1000	13.5	50.0	42	13.5
800	10.5	50.0	42	10.5
600	8.0	50.0	42	8.0
400	5.5	50.0	42	5.5
200	2.5	50.0	42	2.5

Figure 10 is a line graph showing the Power [W] versus Voltage [V] characteristics of a solar cell at a constant temperature of 25 °C. The x-axis represents Voltage [V] from 0 to 60, and the y-axis represents Power [W] from 0 to 600. Four curves are plotted, corresponding to different incident irradiances: 1000 W/m² (red), 800 W/m² (green), 600 W/m² (purple), and 400 W/m² (blue). The curves show a peak power around 40-45 V, with the peak power increasing linearly with incident irradiance.

Voltage [V]	Power [W] (1000 W/m²)	Power [W] (800 W/m²)	Power [W] (600 W/m²)	Power [W] (400 W/m²)
0	0	0	0	0
10	100	80	60	40
20	200	160	120	80
30	300	240	180	120
40	400	320	240	160
45	500	400	300	200
50	0	0	0	0

Nominal Power Watt Pmax(W)*	545
*(Power selection: 0~+ 5W)	
Maximum Power Voltage Vmp(V)	41.70
Maximum Power Current Imp(A)	13.07
Open Circuit Voltage Voc(V)	50.00
Short Circuit Current Isc(A)	13.83
Module Efficiency (%)	21.09

*The data above is for reference only and the actual data is in accordance with the practical testing

*STC (Standard Test Condition): Irradiance 1000W/m². Module Temperature 25±2°C. AM 1.5

*Measuring uncertainty: $\pm 3\%$, all the electrical characteristics such as Power, Im, Vm and FF are within $\pm 3\%$ tolerance.

Solar cells	Mono PERC
Cells orientation	144 (6×24)
Module dimension	2279×1134×30 mm (With Frame)
Weight	31.5±1.0 kg
Glass	2.0 mm+2.0mm, High Transmission, AR Coated Heat Strengthened Glass
Junction box	IP 68, 3 diodes
Cables	4 mm ² ,350 mm (With Connectors)
Connectors*	MC4-compatible

*Please refer to regional datasheet for specified connector

Maximum Power Pmax(Wp)	406.80
<small>* (measured conditions: D=1000W/m²)</small>	
Maximum Power Voltage Vmpp(V)	38.80
Maximum Power Current Impp(A)	10.49
Open Circuit Voltage Voc(V)	46.70
Short Circuit Current Isc(A)	11.17

*(Power selection: 0~+5W)

*NMOT:Irradiance 800W/m², Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s

Front power Pmax/W	545
Total power Pmax/W	681
Vmp/V(Total)	41.80
Imp/A(Total)	16.30
Voc/V(Total)	50.10
Isc/A(Total)	17.25

*Bifacial Gain: The additional gain from the back side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

NMOT	44°C ±2°C	Maximum system voltage	1500 V DC
Temperature coefficient of Pmax	-0.35%/°C	Operating temperature	-40°C~+85°C
Temperature coefficient of Voc	-0.29%/°C	Maximum series fuse	30 A
Temperature coefficient of Isc	0.05%/°C	Front Side Maximum Static Loading	Up to 5400Pa
Refer.Bifacial Factor	70±10%	Rear Side Maximum Static Loading	Up to 2400Pa

*Remark: Do not connect Fuse in Combiner Box with two or more strings in parallel connection

WORKING CONDITIONS