

C2 Solar Panel

Solar panel: HSM-BD66-GR

645-670 W | Up to 24.8 % efficiency



Ideal for power plant applications



Framed glass-glass



Half-cut back-contact technology



Bifacial energy generation

High energy yield

Improved power density

Up to 75 % power bifaciality

Low temperature coefficient

Long term reliability

Built to last with robust frame and heat-strengthened glass

Certified across all weather conditions

Low degradation rate

A safe investment

Rigorous supply chain qualification procedures

Higher power density reduces LCOE

Backed by a financially strong company

Comprehensive warranty coverage

Product and power coverage 15-30 Years

Year 1 minimum warranted output 99.0 %

Maximum annual degradation 0.35 %

S&P Global



Electrical Data - Front STC Characteristics¹

	HSM-BD66-GR670	HSM-BD66-GR665	HSM-BD66-GR660	HSM-BD66-GR655	HSM-BD66-GR650	HSM-BD66-GR645
Nominal Power (P _{nom}) ²	670 W	665 W	660 W	655 W	650 W	645 W
Power Binning	+3/0 %	+3/0 %	+3/0 %	+3/0 %	+3/0 %	+3/0 %
Panel Efficiency	24.8 %	24.6 %	24.4 %	24.2 %	24.1 %	23.9 %
Rated Voltage (V _{mpp})	41.59 V	41.50 V	41.41 V	41.32 V	41.23 V	41.14 V
Rated Current (I _{mp})	16.11 A	16.03 A	15.94 A	15.86 A	15.77 A	15.68 A
Open-Circuit Voltage (V _{oc}) ²	50.00 V	49.85 V	49.70 V	49.55 V	49.40 V	49.25 V
Short-Circuit Current (I _{sc}) ²	16.95 A	16.88 A	16.80 A	16.73 A	16.65 A	16.57 A

BNPI Data³

Nominal Power (P _{max})	732 W	727 W	721 W	716 W	710 W	705 W
Open-Circuit Voltage (V _{oc})	50.15 V	49.99 V	49.83 V	49.68 V	49.52 V	49.39 V
Short-Circuit Current (I _{sc})	18.49 A	18.40 A	18.31 A	18.24 A	18.14 A	18.06 A

Bifacial Gain⁴

P _{max} with 5 % Bifacial Gain	704 W	698 W	693 W	688 W	683 W	677 W
I _{sc} with 5 % Bifacial Gain	17.80 A	17.72 A	17.64 A	17.57 A	17.48 A	17.40 A
P _{max} with 10 % Bifacial Gain	737 W	732 W	726 W	721 W	715 W	710 W
I _{sc} with 10 % Bifacial Gain	18.65 A	18.57 A	18.48 A	18.40 A	18.32 A	18.23 A

Electrical Data

Bifaciality (ϕP _{max} /ϕI _{sc})	75 % +/-5 %
Bifaciality (ϕV _{oc})	98 % +/-2 %
Maximum System Voltage	1500 V IEC
Testing Temperature	-40 °C to +85 °C
Operation Temperature	-40 °C to +70 °C (IEC TS 63126)
Maximum Series Fuse	30 A
Power Temp. Coef.	-0.26 %/°C
Voltage Temp. Coef.	-0.20 %/°C
Current Temp. Coef.	0.05 %/°C

Mechanical Data

Solar Cells	N-Type Back Contact
Glass	2.0 mm + 2.0 mm, semi tempered glass AR coating on front glass
Junction Box	IP-68, 3 bypass diodes
Connector	Huanxin H4
Weight	32.5 kg
Max. Load ⁵	Wind: 2400 Pa, 245 kg/m ² front & back Snow: 5400 Pa, 550 kg/m ² front
Impact Resistance	25 mm diameter hail at 23 m/s
Frame	Silver Anodized Aluminum Alloy

Packaging Configuration

Number of modules per pallet	36
Number of pallets per 40ft HQ container	20
Number of modules per container	720

Tests and Certifications

Standard Tests	IEC 61215, IEC 61730
Fire Rating	Class C (IEC 61730 - 2 / UL 790)
Protection Class	Class II (IEC 61140)
Quality Certs	ISO 9001:2015, ISO 14001:2015
EHS Compliance	ISO 45001:2018, ISO 50001:2018, Recycling Scheme



Please read the safety and installation instructions.
Visit www.tclsolar.com/resources
Paper version can be requested through
techsupport.EN@sunpowerglobal.com

- 1 Standard Test Conditions (1000 W/m² irradiance, AM 1.5, 25 °C). NREL calibration Standard: SOMs current, LACCS F-F and Voltage.
- 2 Measurements tolerance +/-3 %.
- 3 BNPI Test Condition (front 1000 W/m², rear 135 W/m² irradiance, AM 1.5, 25 °C).
- 4 The additional gain from the back side of the panel compared to the power of the front side of the panel at the standard test conditions. It depends on mounting (structure, height, tilt angle etc.) and albedo of the underlying surface.
- 5 Test load as per IEC 61215-2 is equal to design load with safety factor = 1.5. See "Safety and Installation Instructions" for details.

