

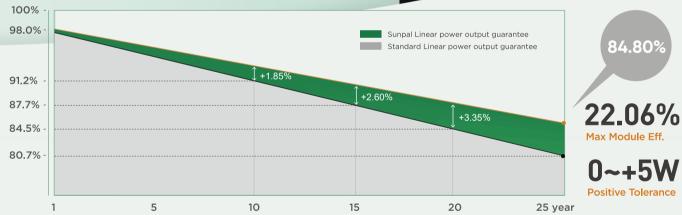
# 660~685W

# 210mm Cells Mono PERC with MBB & Half-cut Technology

## **Quality Guarantee**

12-year Warranty for Materials and Processing 25-year Warranty for Extra Linear Power Output





#### **Complete System and Product Certifications**

IEC 61215, IEC 61730, UL 61730 ISO 9001:2008: ISO Quality Management System ISO 14001: 2004: ISO Environment Management System OHSAS 18001: 2007 Occupational Health and Safety









\* Specifications subject to technical changes and tests. Sunpal Solar reserves the right of interpretation.

Positive power tolerance (0~+5W) guaranteed

High module conversion efficiency (up to 22.06%)

Slower power degradation enabled by Low LID Mono PERC technology: first year <2%, 0.55% year 2-25

 ${\bf Solid\ PID\ resistance}\ {\bf ensured\ by\ solar\ cell\ process\ optimization\ and\ careful\ module\ BOM\ selection$ 

Reduced resistive loss with lower operating current

**Higher energy yield** with lower operating temperature

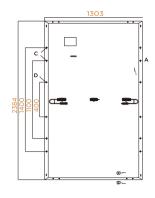
Reduced hot spot risk with optimized electrical design and lower operating current

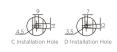






#### Design (mm)







#### Tolerance: Units: mm

Length: ±2mm Width: ±2mm Height: ±1mm Hole distance: ±1mm

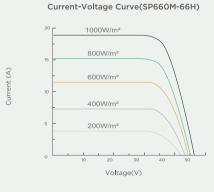
Cell Orientation	132 (6x22)
Junction Box	IP68, three diodes
Output Cable	4mm², 300mm in length,
	length can be customized
Glass	Single glass
	3.2mm coated tempered glass
Frame	Anodized aluminum alloy frame
Weight:	33.6kg ± 3%
Dimension	2384×1303×35 mm
Packaging	31pcs per pallet
	558pcs per 40'GP

Operational Temperature	-40°C~+85°C					
Power Output Tolerance	0~+5W					
Voc & Isc Tolerance	±3%					
Max. System Voltage	DC1500V(IEC/UL)					
Max. Series Fuse Ratin	30A					
NOCT	45±2°C					
Safety Class	II					
Fire Rating	UL type 1 or 2					
Max. Static Load(Front)	5400Pa					
Max. Static Load(Back)	2400Pa					

Electrical Characteristics			·										
Model Number	SP660M-66H		SP665M-66H		SP670M-66H		SP675M-66H		SP680M-66H		SP685M-66H		
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	
Maximum Power (Pmax/W)	660	500	665	504	670	508	675	512	680	516	685	520	
Open Circuit Voltage (Voc/V)	45.7	43	45.9	43.2	46.1	43.4	46.3	43.6	46.5	43.8	46.7	44	
Short Circuit Current (Isc/A)	18.53	14.93	18.58	14.97	18.63	15.01	18.68	15.05	18.73	15.09	18.78	15.13	
Voltage at Maximum Power (Vmp/V)	37.8	35.3	38	35.5	38.2	35.7	38.4	35.9	38.6	36.1	38.8	36.3	
Current at Maximum Power (Imp/A)	17.47	14.17	17.5	14.2	17.54	14.23	17.58	14.27	17.62	14.3	17.66	14.33	
Module Efficiency(%)	21	21.25		21.41		21.57		21.73		21.9		22.06	
Temperature Coefficient of Isc		+0.04%/°C											
Temperature Coefficient of Voc		-0.25%/°C											
Temperature Coefficient of Pmax		-0.34%/°C											

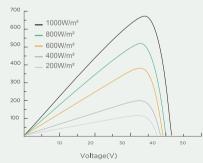
 $<sup>^{*}</sup>$  STC (Standard Testing Conditions): Irradiance 1000W/m $^{2}$ , Cell Temperature 25 $^{\circ}$ C, Spectra at AM1.5

#### I-V Curve



### \_\_ 1000W/m² \_\_ 800W/m² - 600W/m² 400W/m<sup>2</sup> 200W/m

Current-Voltage Curve(SP660M-66H)



<sup>\*</sup>Specfications included in this datasheet are subject to change without notice.



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<sup>\*</sup> NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C, Spectra at AM1.5, Wind at 1m/S

<sup>\*</sup>Test uncertainty for Pmax: ±3%

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<sup>\*</sup>CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.