

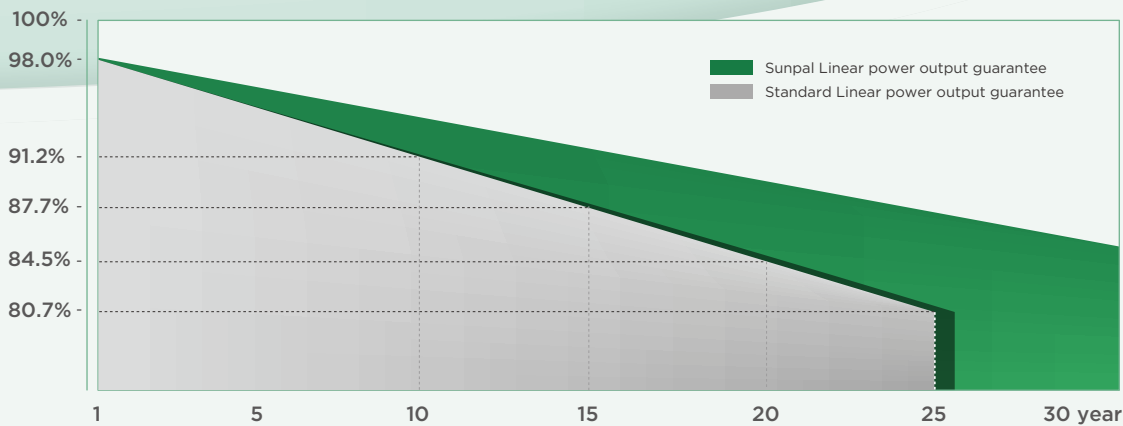
BiMAX 5 *Transparent Backsheet*

470~490W

182mm Cells Mono Bifacial PERC with MBB & Half-cut Technology

Quality Guarantee

12-year material & technology warranty
30-year linear power output warranty



21.64%
Max Module Eff.

0~+5W
Positive Tolerance

Front side performance equivalent to conventional low LID mono PERC:

- >High module conversion efficiency (up to 21.64%)
- >Better energy yield with excellent low irradiance performance and temperature coefficient
- >First year power degradation <2%

Bifacial technology enables additional energy harvesting from rear side (up to 25%)

Glass/glass lamination ensures 30 year product lifetime, with annual power degradation < 0.45%, 1500V compatible to reduce BOS cost

Solid PID resistance 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

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.



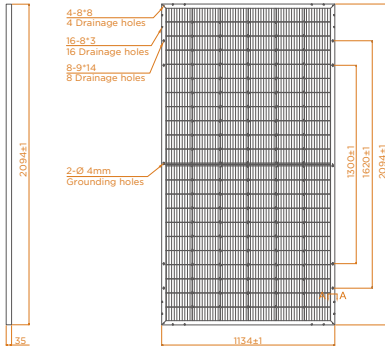
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Q Sunpal Solar

Design (mm)



*Units: mm
*Tolerance: ±2mm

Cell Orientation	132 (6x22)
Junction Box	IP68, three diodes
Output Cable	4mm ² , 300mm in length, length can be customized
Glass	Front Glass 3.2mm coated tempered glass
Frame	Anodized aluminum alloy frame
Weight:	26.0kg±3%
Dimension	2094×1134×35mm
Packaging	30pcs per pallet 660pcs per 40'ft Container

Operational Temperature	-40°C~+85°C
Power Output Tolerance	0~+5W
Voc & Isc Tolerance	±3%
Max. System Voltage	DC1500V(IEC/UL)
Max. Series Fuse Rating	20A
NOCT	45±2°C
Safety Class	II
Fire Rating	UL type 3
Bifaciality	Glazing 70±5%
Max. Static Load(Front)	5400Pa
Max. Static Load(Back)	2400Pa

Electrical Characteristics

Model Number	SP470MB-66H	SP475MB-66H	SP480MB-66H	SP485MB-66H	SP490MB-66H
Testing Condition	STC	STC	STC	STC	STC
Maximum Power (Pmax/W)	470	475	480	485	490
Open Circuit Voltage (Voc/V)	47.85	48.02	48.18	48.34	48.51
Short Circuit Current (Isc/A)	12.78	12.85	12.92	12.99	13.06
Voltage at Maximum Power (Vmp/V)	39.53	39.72	39.90	40.08	40.26
Current at Maximum Power (Imp/A)	11.89	11.96	12.03	12.10	12.17
Module Efficiency(%)	19.79%	20.00%	20.21%	20.42%	21.64%
Temperature Coefficient of Isc	+0.050%/°C				
Temperature Coefficient of Voc	-0.280%/°C				
Temperature Coefficient of Pmax	-0.360%/°C				

* STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25°C, Spectra at AM1.5

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

* Test uncertainty for Pmax: ±3%

BIFACIAL OUTPUT-REAR SIDE POWER GAIN

		SP470MB-66H	SP475MB-66H	SP480MB-66H	SP485MB-66H	SP490MB-66H
5%	Maximum power (Pmax/W)	494	499	504	509	515
	Module Efficiency STC (%)	20.78%	21.00%	21.22%	21.45%	21.67%
15%	Maximum power (Pmax/W)	541	546	552	558	564
	Module Efficiency STC (%)	22.76%	23.00%	23.25%	23.49%	23.81%
25%	Maximum power (Pmax/W)	588	594	600	606	613
	Module Efficiency STC (%)	24.74%	25.00%	25.27%	25.53%	25.79%

** Bifaciality = Pmax, rear / Rated Pmax, front

I-V Curve

