EXPERTPOWER®
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SPDRM540

Bifacial Half-cut Mono PERC Panel

SPDRM540

Bifacial Half-cut Monocrystalline PERC Module

Exceptional Efficiency

Utilizing advanced processing techniques, our solar panel achieves an impressive monofacial module efficiency of up to 20.90%, ensuring a consistently high power output. And an out-of-this world 26.13% bifacial under optimal conditions.

Reliable Power Output

Benefit from a ~+5W positive tolerance, providing increased output reliability and maximizing energy harvest from your solar investment.

Optimal Performance in Low-Light Conditions

Experience the outstanding performance of bifacial solar panels which produce more power even in challenging low-light environments such as dawn, dusk, and cloudy days, making our solar panel a dependable energy solution.

Cutting-Edge Cell Technology

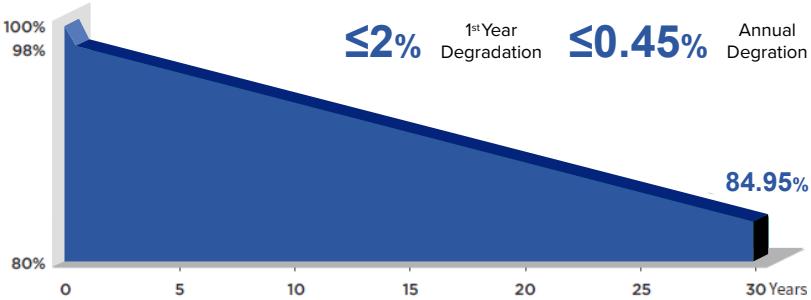
Engineered with advanced cell technology and premium materials, our solar panel boasts high resistance to Potential-Induced Degradation (PID), ensuring long-lasting and efficient operation.

Robust Mechanical Load Capacity

With a mechanical load resistance of Positive 5,400 Pa and Negative 2,400 Pa, our solar panel is designed to withstand diverse environmental conditions, providing durability and reliability.

Superior Quality for Harsh Environments

Our solar panel's reliable quality ensures sustainability, even in challenging environments like deserts, farms, and coastlines, making it a resilient choice for diverse applications.



≤2% 1st Year Degradation ≤0.45% Annual Degration

Expert Power Monocrystalline Module Linear Performance Warranty

Product Material & Workmanship
12 YEAR WARRANTY

Linear Performance
30 YEAR WARRANTY

UL LISTED
[PHOTOVOLTAIC MODULE OVER 600 VOLTS]
UL File No. E515622

TÜV SÜD

The specifications and key features outlined in this datasheet are subject to change, modification, or updates at any time, solely at the discretion of ExpertPower. This may occur without prior notice to the user, driven by ongoing research and development efforts and continuous product improvement processes implemented at our factory. As a result, ExpertPower retains the right to make adjustments to the information presented herein. Users of this datasheet are responsible for acquiring the latest revision, ensuring alignment with the specific ExpertPower product they have purchased or intend to purchase. Stay informed and updated with the latest specifications for optimal utilization of our products.

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ELECTRICAL PROPERTIES	STC*	NOCT**
Peak Power (Pmax | W)	540	408
MPP Voltage (Vmp | V)	41.65	39.00
MPP Current (Imp | A)	12.97	10.47
Open Circuit Voltage (Voc | V)	49.61	46.43
Short Circuit Current (Isc | A)	13.85	11.10
Module Efficiency (%)	20.90	N/A
Power Tolerance(%)	0 ~ +3	N/A
Operating Temperature	-40℃ ~+ 85℃ or -40°F ~+ 185°F	N/A
Maximum System Voltage	1500V DC	N/A
Maximum Series Fuse Rating	25A	N/A

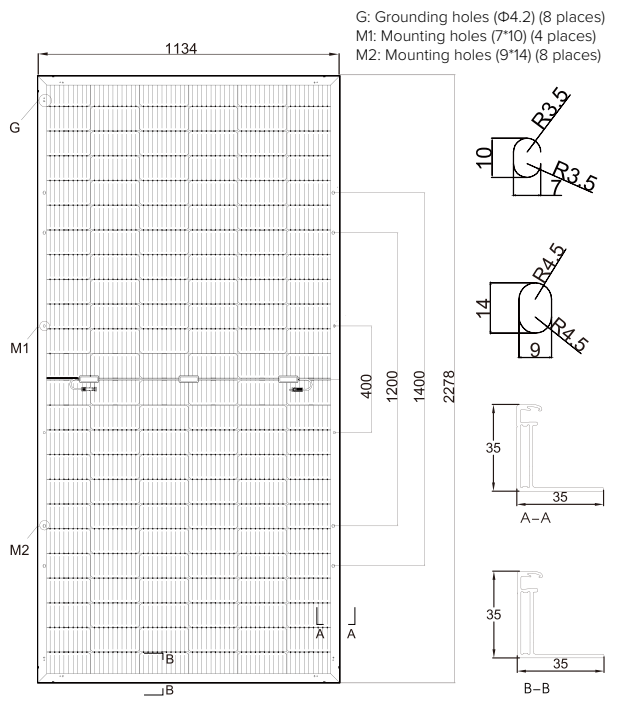
*STC (Standard Test Condition): Irradiance 100W/m², Cell Temperature 77°F, AM 1.5
**NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 68°F, AM 1.5, Wind Speed 1m/s

MECHANICAL PROPERTIES	
Cell Type	Mono PERC (M10)
Number of Cells	144 (24*6)
Dimension	2278*1134*35 mm / 90*45*1.4 inch
Weight	31 kg / 68.34 lbs
Front Glass	2.0 mm AR coated tempered glass
Frame	Silver, Anodized aluminum alloy
Junction Box	IP68 R, 3 diodes
Cable Type	4.0 mm²
Fire Type (Rating)	UL Type 1 / IEC Class C
Length Of Cable	300 mm / 11.8 inch

TEMPERATURE COEFFICIENT	
Temp.coeff. Of Pmax (Tk Pmax)	-0.35%/℃
Temp.coeff. Of Voc (Tk Voc)	-0.275%/℃
Temp.coeff. Of Isc (Tk Isc)	-0.045%/℃

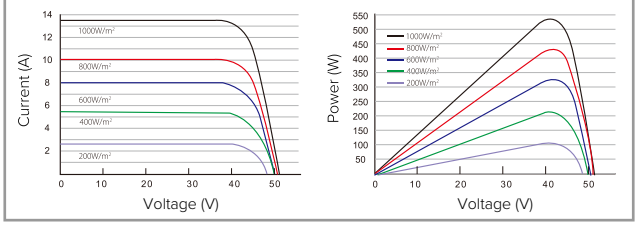
BIFACIAL OUTPUT-REARSIDE POWER GAIN		
5%	Maximum Power (Pmax | W)	572
	Maximum Efficiency STC (%)	21.95
15%	Maximum Power (Pmax | W)	627
	Maximum Efficiency STC (%)	24.04
25%	Maximum Power (Pmax | W)	681
	Maximum Efficiency STC (%)	26.13

ENGINEERING DRAWING (unit: mm)



I-V CURVES

Current-Voltage & Power-Voltage Curves (540W)



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