



430~450W

M10 solar modules Aquaman series

Mono SMBB TOPCon large size half cut
full black bifacial double glass module

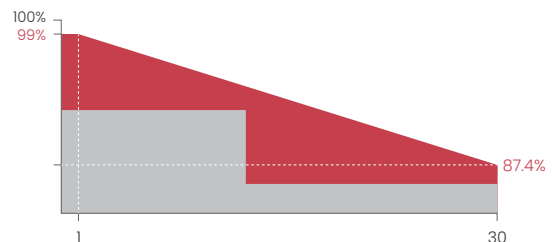
Products can match different installation conditions, taking into account high adaptability and high compatibility. With mature support and inverter scheme, customized design for distributed and centralized ground power stations.

MODULE CHARACTER

-  Exceptional PID Resistance
-  Salt mist resistance/Ammonia resistance
/dust and hail resistance
-  Production process reliability test
-  0~+5W Positive Tolerance
-  Lower LID / LETID
-  Reduce BOS cost increase ROI
-  Non-destructive cutting

CERTIFICATION

IEC61215/IEC61730
ISO9001:Quality Management System
ISO14001:Environmental Management System
ISO45001:Occupational Health and Safety Management System



Linear performance warranty



Product warranty

SUNRISE ENERGY CO., LTD

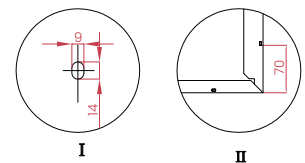
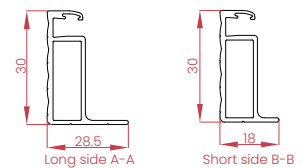
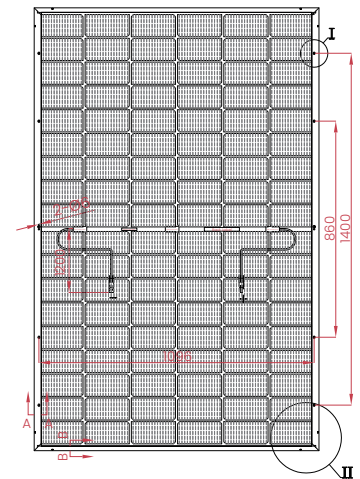
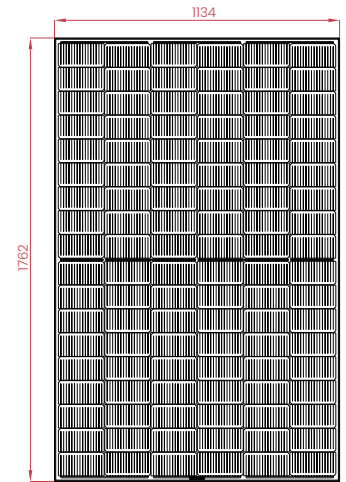
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ADD: No.20 Tongzi River West Road, Zhonglou Development Zone, Changzhou, Jiangsu



Module Type	SR-54M 430NHLPro		SR-54M 435NHLPro		SR-54M 440NHLPro		SR-54M 445NHLPro		SR-54M 450NHLPro	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Module Efficiency (%)	21.53		21.78		22.03		22.28		22.53	
Tolerance (W)	0~+5		0~+5		0~+5		0~+5		0~+5	
Test Environment	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power Pmax(W)	430	324.39	435	328.16	440	331.93	445	335.70	450	339.48
Open Circuit Voltage Voc(V)	38.56	36.83	38.79	37.05	39.02	37.27	39.25	37.49	39.48	37.71
Short Circuit Current Isc(A)	14.26	11.51	14.34	11.58	14.42	11.64	14.50	11.71	14.58	11.77
Maximum Power Voltage Vm(V)	31.86	29.90	32.05	30.07	32.24	30.25	32.43	30.43	32.62	30.61
Maximum Power Current Im(A)	13.50	10.89	13.58	10.95	13.65	11.01	13.73	11.07	13.80	11.13
Cell Type (mm)	M10 TOPCon									
Number of Cells (Pcs)	108(6×18)									
Maximum System Voltage (V)	DC1500									
Temp.Coeff.of Voc (%/°C)	-0.29									
Temp.Coeff.of Isc (%/°C)	0.045									
Temp.Coeff.of Pm (%/°C)	-0.25									
Operating Temperature (°C)	-40 to 85									
Nominal Operating Cell Temperature(NOCT) (°C)	45±2									
Max.Series Fuse (A)	30									
Pressure Bearing (Pa)	5400									
Wind Bearing (Pa)	2400									

ENGINEERING DRAWINGS



Length: ±2mm
 Width: ±2mm
 Thickness: ±1mm
 Pitch-row: ±2mm

STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5
 NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind speed 1m/s

Different backside power gains(430W)	10%	15%	20%	25%
Peak Power Pmax(W)	473	494.5	516	537.5
Open Circuit Voltage Voc(V)	38.57	38.59	38.60	38.61
Short Circuit Current Isc(A)	15.68	16.39	17.10	17.80
Maximum Power Voltage Vm(V)	31.87	31.88	31.89	31.9
Maximum Power Current Im(A)	14.85	15.52	16.19	16.85

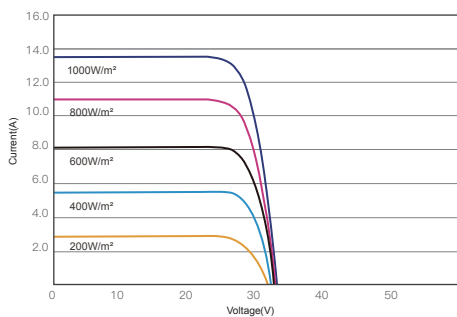
MATERIAL DETAILS

Frame	Anodized aluminum	Cable&Connector	4mm ² , EVO2 or EVO2 compatible
Cell	6×18pcs mono solar cell	Junction Box	Ip≥68, TÜV&UL
Glass	2×2.0mm Anti-Reflection Coating Heat Strengthened Glass	Net length of Cable	1200mm or as customer's requirements

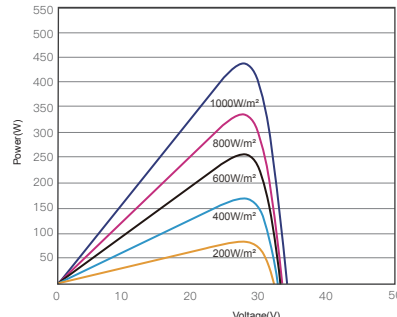
PACKING DETAILS

Dimension	1762×1134×30mm	Weight	26.8kg
Loading Capacity	936pcs/40'HC	Packing	36pcs/pallet

IV CURVES



I-V CURVES OF PV MODULE(440W)



P-V CURVES OF PV MODULE(440W)