



425~450W

M10 solar modules Aquaman series
Mono MBB **N-type** large size half cut module

Excellent technical advantages and system design scheme to achieve high reliability, power generation effective gain and EPC cost reduction. Products can match different installation conditions, taking into account high adaptability and high compatibility. With mature support and inverter scheme, customized design for industrial and commercial and centralized ground power stations.

MODULE CHARACTER

-  PID Resistance
-  Salt mist resistance/Ammonia resistance
/dust and hail resistance
-  Production process reliability test
-  0~+5W Positive Tolerance
-  Mono MBB half cut
-  Reduce BOS cost increase ROI
-  Non-destructive cutting

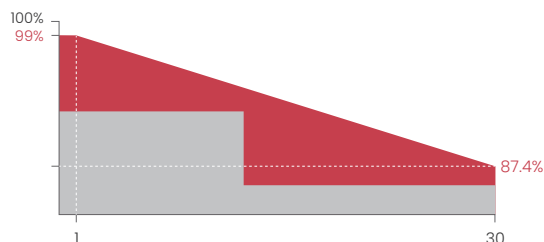
CERTIFICATION

IEC61215/IEC61730

ISO9001:Quality Management System

ISO14001:Environmental Management System

ISO45001:Occupational Health and Safety Management System



Linear performance warranty



Product warranty

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⚠ If any update, Sunrise would not make further notice. Sunrise reserves the right of final interpretation.



Module Type	SR-54M 425NHLPro		SR-54M 430NHLPro		SR-54M 435NHLPro		SR-54M 440NHLPro		SR-54M 445NHLPro		SR-54M 450NHLPro	
Module Efficiency (%)	21.29		21.54		21.79		22.05		22.3		22.55	
Tolerance (W)	0 ~ +5		0 ~ +5		0 ~ +5		0 ~ +5		0 ~ +5		0 ~ +5	
Test Environment	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power Pmax(W)	425	320.6	430	324.4	435	328.2	440	331.9	445	335.70	450	339.48
Open Circuit Voltage Voc(V)	38.38	36.66	38.61	36.88	38.84	37.10	39.07	37.32	39.30	37.54	39.53	37.76
Short Circuit Current Isc(A)	14.16	11.43	14.24	11.49	14.32	11.56	14.41	11.63	14.48	11.69	14.55	11.75
Maximum Power Voltage Vm(V)	31.71	29.75	31.90	29.93	32.09	30.11	32.28	30.29	32.47	30.47	32.66	30.65
Maximum Power Current Im(A)	13.41	10.81	13.48	10.87	13.56	10.93	13.64	11.00	13.71	11.06	13.78	11.11
Cell Type (mm)	SMBB-Mono-Crystalline Silicon											
Number of Cells (Pcs)	108(6×18)											
Maximum System Voltage(V)	DC1500											
Temp.Coeff.of Voc (%/°C)	-0.249											
Temp.Coeff.of Isc (%/°C)	0.045											
Temp.Coeff.of Pm (%/°C)	-0.3											
Operating Temperature(°C)	-40 to 85											
Nominal Operating Cell Temperature(NOCT) (°C)	45±2											
Max.Series Fuse (A)	25											
Pressure Bearing(Pa)	5400											
Wind Bearing (Pa)	2400											

STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5

NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind speed 1m/s

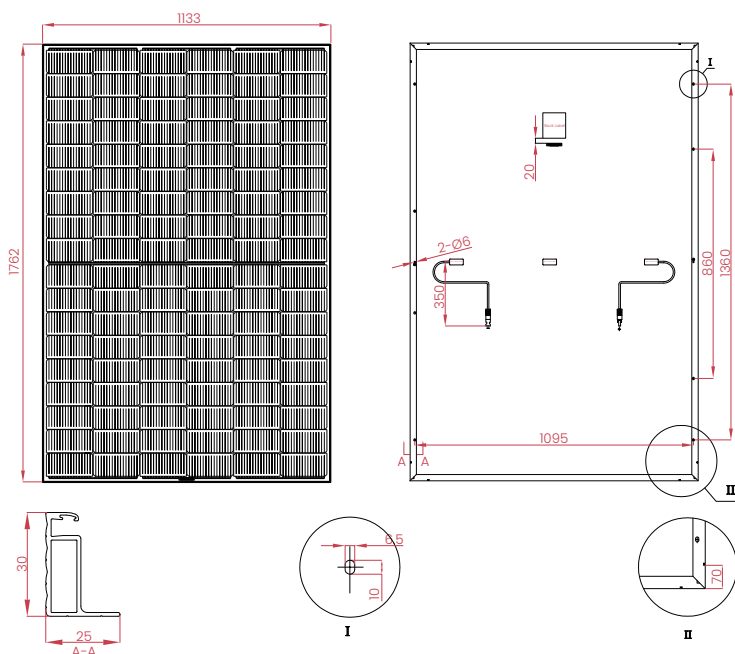
MATERIAL DETAILS

Frame	Anodized aluminum	Net length of Cable	350mm or as customer's requirements
Cell	6×18pcs mono solar cell	Junction Box	IP≥68, TÜV & UL
Diode quantity	3	Cable&Connector	4mm ² , EVO2 or EVO2 compatible
Glass	3.2mm Anti-Reflection Coating Heat Strengthened Glass		

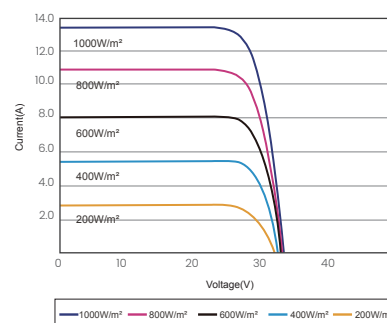
PACKING DETAILS

Dimension	1762×1133×30mm	Weight	21kg
Loading Capacity	936pcs/40HC	Packing	36pcs/pallet

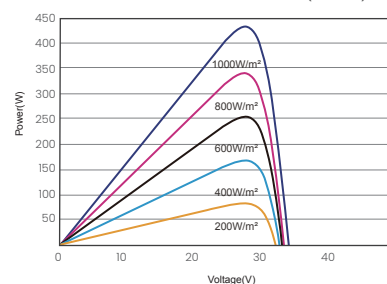
ENGINEERING DRAWINGS



IV CURVES



I-V CURVES OF PV MODULE(440W)



P-V CURVES OF PV MODULE(440W)