

**Aquaman Series**  
M10 Mono Half Cell Module

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**SR-60MHLPro**      SR-60M435HLPro  
                                  SR-60M440HLPro  
**435~455W**        SR-60M445HLPro  
                                  SR-60M450HLPro  
                                  SR-60M455HLPro

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



Higher Power Output



Better Low-light Performance



MBB Half Cut Cell With PERC Technology



less shading effect

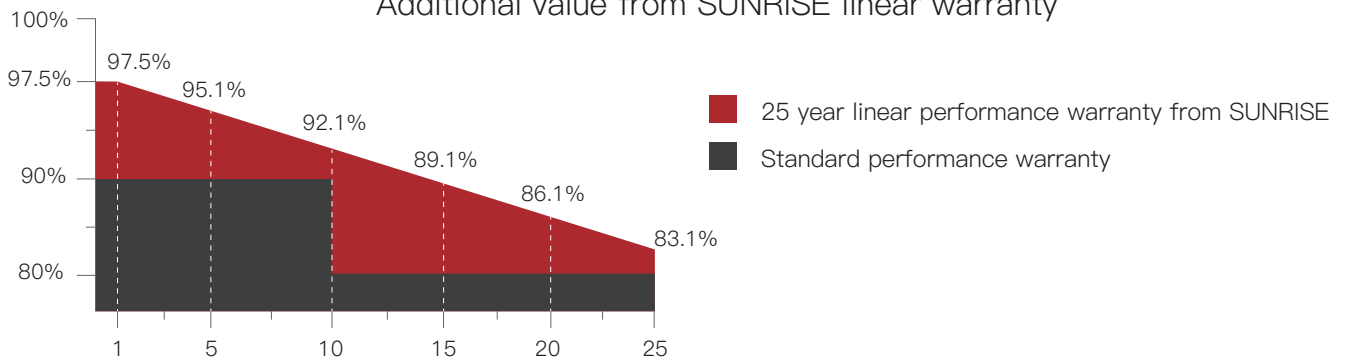


0~+5W Positive Tolerance



PID Resistance

Additional value from SUNRISE linear warranty

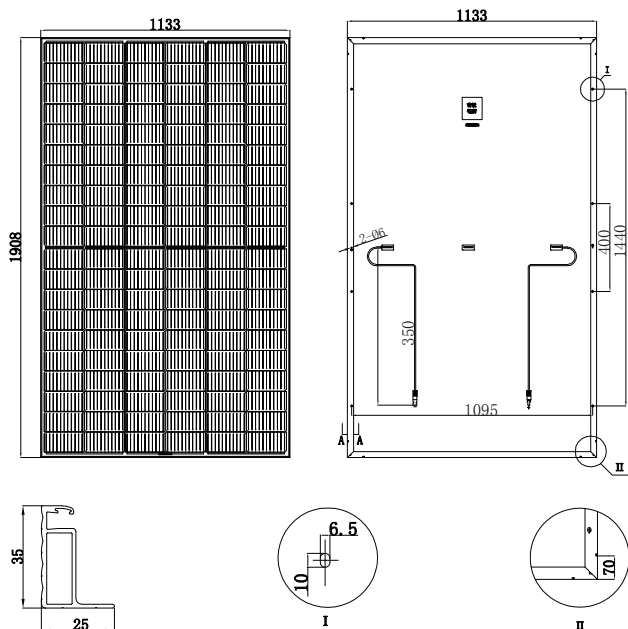


Module Type		SR-60M435HLPPro		SR-60M440HLPPro		SR-60M445HLPPro		SR-60M450HLPPro		SR-60M455HLPPro	
Test Environment		STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Tolerance	(W)	0 ~ +5									
Module Efficiency	(%)	20.13		20.36		20.59		20.82		21.05	
Maximum Power	Pmax(W)	435	323.74	440	327.46	445	331.18	450	334.9	455	338.63
Open Circuit Voltage	Voc(V)	41.38	39.06	41.44	39.12	41.50	39.17	41.56	39.23	41.62	39.29
Short Circuit Current	Isc(A)	13.41	10.83	13.55	10.94	13.67	11.04	13.81	11.15	13.95	11.26
Maximum Power Voltage	Vm(V)	34.16	31.78	34.21	31.83	34.26	31.87	34.31	31.92	34.36	31.97
Maximum Power Current	Im(A)	12.74	10.19	12.87	10.29	12.99	10.39	13.12	10.49	13.25	10.6
Cell Type	(mm)	MBB-182×91mm(Mono-Crystalline Silicon)									
Number of Cells	(Pcs)	120(6×20)									
Maximum System Voltage	(V)	DC1500									
Temp. Coeff. of Voc	(%/°C)	-0.282									
Temp. Coeff. of Isc	(%/°C)	0.05									
Temp. Coeff. of Pm	(%/°C)	-0.348									
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/m<sup>2</sup>, Cell temperature 25°C, AM1.5

NOCT: Irradiance 800W/m<sup>2</sup>, Ambient temperature 20°C, Wind speed 1m/s

## ENGINEERING DRAWINGS

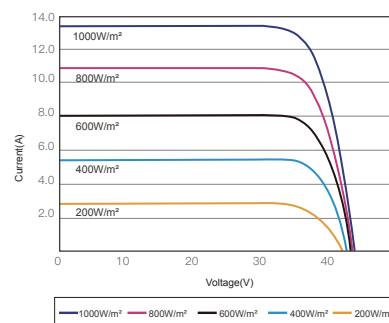


Manufactured in China

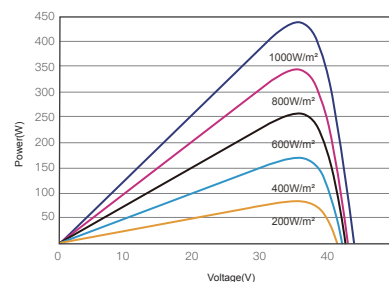
## MATERIAL DETAILS

Frame	Anodized aluminum
Glass	3.2mm low-iron tempered suede glass
Cell	6×20pcs mono solar cell
Junction Box	IP ≥ 68, TÜV & UL
Diode quantity	3
Cable&Connector	4mm <sup>2</sup> , EVO2 or EVO2 compatible
Cable length	350mm or as customer's requirements

## IV CURVES



I-V CURVES OF PV MODULE(445W)



P-V CURVES OF PV MODULE(445W)

## PACKING DETAILS

Dimension	(mm)	1908×1133×35
Weight	(kg)	24
Loading Capacity		744pcs/40HC
Packing	pcs/pallet	31