

# 400w~415w

## M10 solar modules Aquaman series

Mono MBB perc large size half cut  
**full black module**

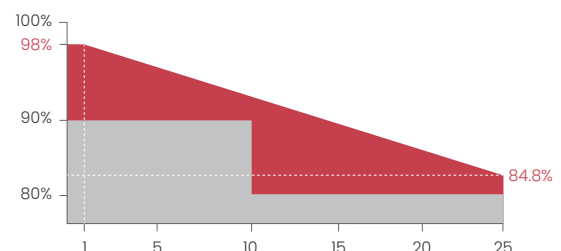
Excellent technical advantages and system design scheme to achieve high reliability, power generation effective gain and EPC cost reduction. Products can match different installation conditions, taking into account high adaptability and high compatibility. With mature support and inverter scheme, customized 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
-  BIPV All black BIPV

### 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-54M400HLPro		SR-54M405HLPro		SR-54M410HLPro		SR-54M415HLPro	
Module Efficiency (%)	20.5		20.75		21.01		21.26	
Tolerance (W)	0 ~ +5		0 ~ +5		0 ~ +5		0 ~ +5	
Test Environment	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power Pmax(W)	400	297.69	405	301.41	410	305.13	415	308.86
Open Circuit Voltage Voc(V)	37.01	34.93	37.24	35.15	37.47	35.37	37.70	35.58
Short Circuit Current Isc(A)	13.79	11.13	13.86	11.15	13.96	11.27	14.04	11.34
Maximum Power Voltage Vm(V)	30.55	28.42	30.74	28.60	30.93	28.78	31.12	28.95
Maximum Power Current Im(A)	13.1	10.48	13.17	10.49	13.26	10.60	13.34	10.67
Cell Type (mm)	MBB(Mono-Crystalline Silicon)							
Number of Cells (Pcs)	108(6×18)							
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

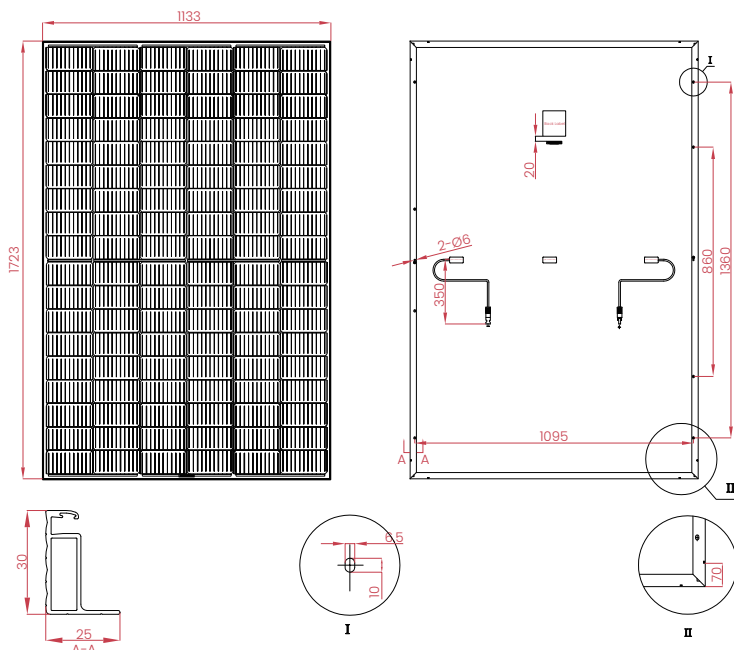
### MATERIAL DETAILS

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 <sup>2</sup> , EVO2 or EVO2 compatible
Glass	3.2mm Anti-Reflection Coating Heat Strengthened Glass		

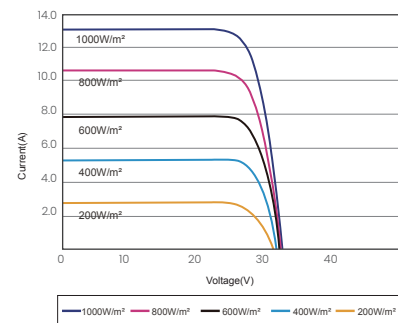
### PACKING DETAILS

Dimension	1723×1133×30mm	Weight	20kg
Loading Capacity	936pcs/40HC	Packing	36pcs/pallet

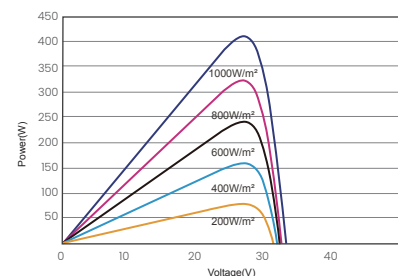
### ENGINEERING DRAWINGS



### IV CURVES



I-V CURVES OF PV MODULE(410W)



P-V CURVES OF PV MODULE(410W)