



# 395w~415w

## M10 solar modules **Aquaman series**

Mono MBB perc large size half cut  
**double glass module**

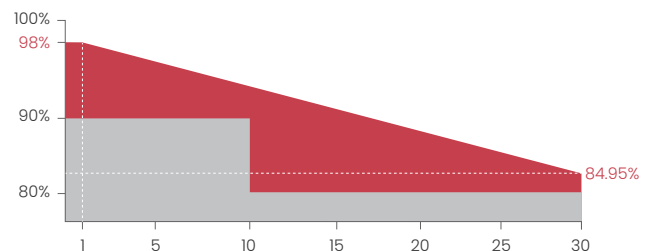
Excellent technical advantages and system design scheme to achieve high reliability, power generation effective gain and EPC cost reduction. Products can match different installation conditions, taking into account high adaptability and high compatibility. With mature support and inverter scheme, customized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

### 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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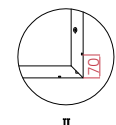
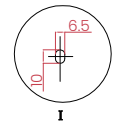
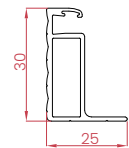
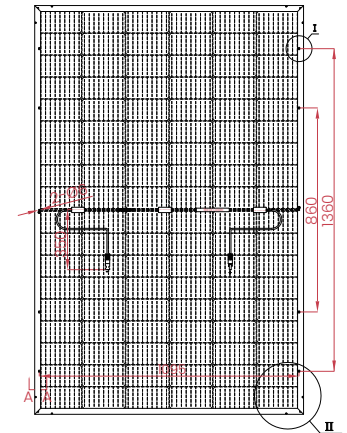
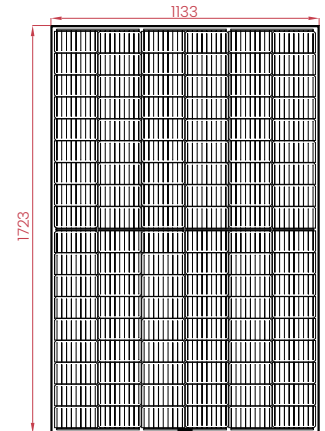
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# SR-54MHLPro 395w-415w Aquaman series



## ENGINEERING DRAWINGS



| Module Type                                   | SR-54M 395HLPro               |        | SR-54M 400HLPro |        | SR-54M 405HLPro |        | SR-54M 410HLPro |        | SR-54M 415HLPro |        |
|---|-------------------------------|--------|-----------------|--------|-----------------|--------|-----------------|--------|-----------------|--------|
|   | STC                           | NOCT   | STC             | NOCT   | STC             | NOCT   | STC             | NOCT   | STC             | NOCT   |
| Module Efficiency (%)                         | 20.24                         |        | 20.5            |        | 20.75           |        | 21.01           |        | 21.26           |        |
| 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)                         | 395                           | 293.97 | 400             | 297.69 | 405             | 301.41 | 410             | 305.13 | 415             | 308.86 |
| Open Circuit Voltage Voc(V)                   | 36.74                         | 34.68  | 36.97           | 34.90  | 37.20           | 35.12  | 37.43           | 35.33  | 37.66           | 35.55  |
| Short Circuit Current Isc(A)                  | 13.72                         | 11.07  | 13.80           | 11.14  | 13.88           | 11.21  | 13.97           | 11.28  | 14.05           | 11.35  |
| Maximum Power Voltage Vm(V)                   | 30.33                         | 28.22  | 30.52           | 28.40  | 30.71           | 28.57  | 30.9            | 28.75  | 31.09           | 28.93  |
| Maximum Power Current Im(A)                   | 13.03                         | 10.42  | 13.11           | 10.48  | 13.19           | 10.55  | 13.27           | 10.61  | 13.35           | 10.68  |
| 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

| Different backside power gains(400W) | 10%   | 15%   | 20%   | 25%   |
|--------------------------------------|-------|-------|-------|-------|
| Peak Power Pmax(W)                   | 440   | 460   | 480   | 500   |
| Open Circuit Voltage Voc(V)          | 36.98 | 36.99 | 37.01 | 37.02 |
| Short Circuit Current Isc(A)         | 15.18 | 15.86 | 16.55 | 17.23 |
| Maximum Power Voltage Vm(V)          | 30.53 | 30.54 | 30.55 | 30.56 |
| Maximum Power Current Im(A)          | 14.42 | 15.07 | 15.72 | 16.37 |

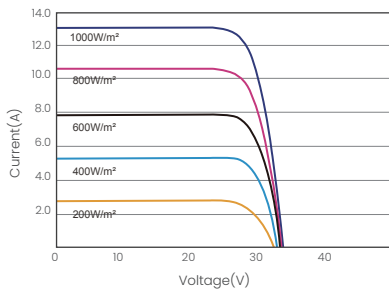
### MATERIAL DETAILS

|                     |                                     |                 |   |
|---------------------|-------------------------------------|-----------------|---|
| Frame               | Anodized aluminum                   | Cable&Connector | 4mm <sup>2</sup> , EVO2 or EVO2 compatible              |
| Cell                | 6×18pcs mono solar cell             | Junction Box    | Ip≥68, TÜV&UL   |
| Net length of Cable | 350mm or as customer's requirements | Glass           | 2×2.0mm Anti-Reflection Coating Heat Strengthened Glass |

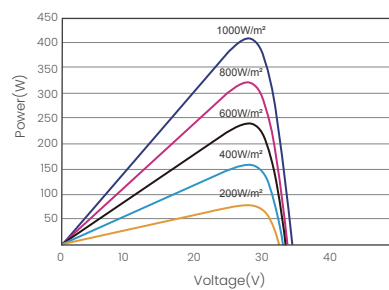
### PACKING DETAILS

|                  |                |         |              |
|------------------|----------------|---------|--------------|
| Dimension        | 1723×1133×30mm | Weight  | 22.8kg       |
| Loading Capacity | 936pcs/40'HC   | Packing | 36pcs/pallet |

### IV CURVES



I-V CURVES OF PV MODULE(405W)



P-V CURVES OF PV MODULE(405W)