






405~425W

M10 solar modules Aquaman series
Mono MBB per large size half cut module

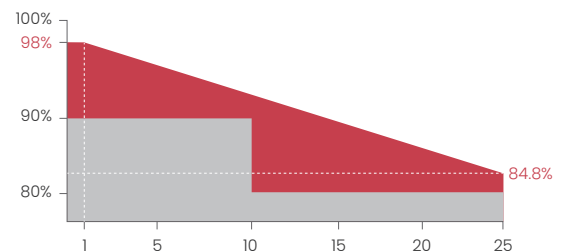
Excellent technical advantages and system design scheme to achieve high reliability, power generation effective gain and EPC cost reduction. Products can match different installation conditions, taking into account high adaptability and high compatibility. With mature support and inverter scheme, customized 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-54M405HLPro | | SR-54M410HLPro | | SR-54M415HLPro | | SR-54M420HLPro | | SR-54M425HLPro | |
|---|-------------------------------|--------|----------------|--------|----------------|--------|----------------|--------|----------------|--------|
| Module Efficiency (%) | 20.75 | | 21.01 | | 21.26 | | 21.52 | | 21.76 | |
| 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) | 405 | 301.41 | 410 | 305.13 | 415 | 308.86 | 420 | 312.58 | 425 | 316.30 |
| Open Circuit Voltage Voc(V) | 37.24 | 35.15 | 37.47 | 35.37 | 37.70 | 35.58 | 37.93 | 35.80 | 38.16 | 36.02 |
| Short Circuit Current Isc(A) | 13.86 | 11.15 | 13.96 | 11.27 | 14.04 | 11.34 | 14.13 | 11.41 | 14.21 | 11.47 |
| Maximum Power Voltage Vm(V) | 30.74 | 28.60 | 30.93 | 28.78 | 31.12 | 28.95 | 31.31 | 29.13 | 31.5 | 29.31 |
| Maximum Power Current Im(A) | 13.17 | 10.49 | 13.26 | 10.60 | 13.34 | 10.67 | 13.42 | 10.73 | 13.5 | 10.80 |
| 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/m², Cell temperature 25°C, AM1.5
 NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind speed 1m/s

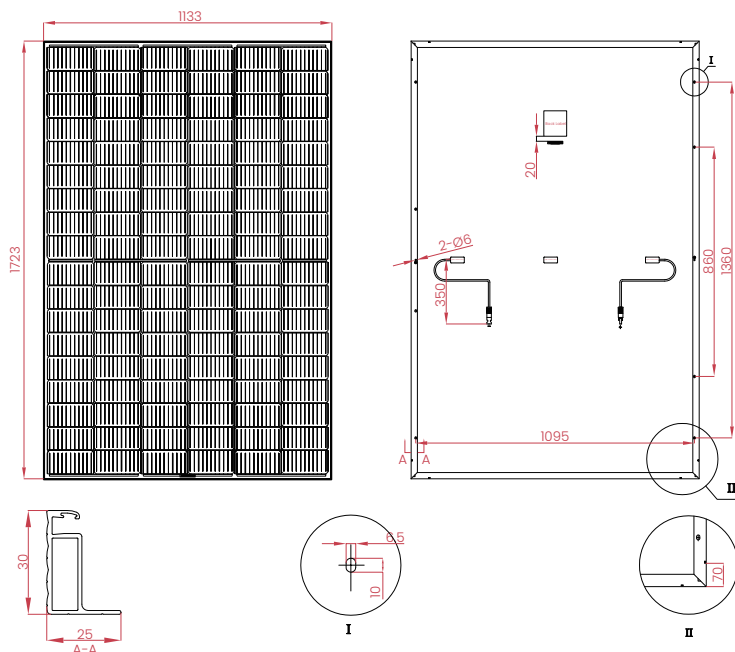
MATERIAL DETAILS

| | | | |
|----------------|---|---------------------|--|
| 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 | | |

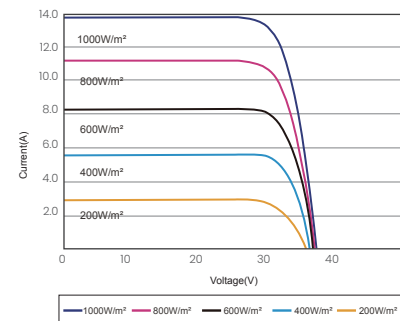
PACKING DETAILS

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

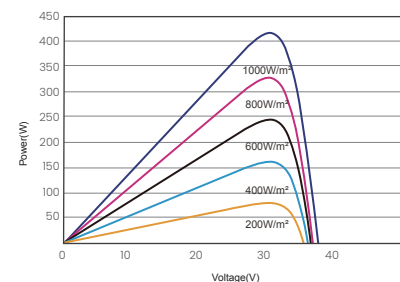
ENGINEERING DRAWINGS



IV CURVES



I-V CURVES OF PV MODULE(415W)



P-V CURVES OF PV MODULE(415W)