

SRP-XXX-BMB: Maximum System Voltage 1000 VDC
 SRP-XXX-BMB-HV: Maximum System Voltage 1500 VDC

Electrical Characteristics

| Module Type | SRP-315-BMB SRP-315-BMB-HV | SRP-320-BMB SRP-320-BMB-HV | SRP-325-BMB SRP-325-BMB-HV | SRP-330-BMB SRP-330-BMB-HV |
|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | STC | STC | STC | STC |
| Maximum Power at STC (Pmp) | 315 | 320 | 325 | 330 |
| Open Circuit Voltage (Voc) | 40.1 | 40.4 | 40.6 | 40.8 |
| Short Circuit Current (Isc) | 9.85 | 9.93 | 10.02 | 10.11 |
| Maximum Power Voltage (Vmp) | 33.7 | 34.0 | 34.2 | 34.4 |
| Maximum Power Current (Imp) | 9.35 | 9.42 | 9.51 | 9.60 |
| Module Efficiency at STC(ηm) | 18.60 | 18.90 | 19.19 | 19.49 |
| Power Tolerance | (0,+4.99) | | | |
| Maximum System Voltage | 1000 VDC / 1500 VDC | | | |
| Maximum Series Fuse Rating | 20A | | | |

STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5;

Temperature Characteristics

| | |
|---|--------------|
| Pmax Temperature Coefficient | -0.38 %/°C |
| Voc Temperature Coefficient | -0.28 %/°C |
| Isc Temperature Coefficient | +0.05 %/°C |
| Operating Temperature | -40 ~ +85 °C |
| Nominal Operating Cell Temperature (NOCT) | 45±2 °C |

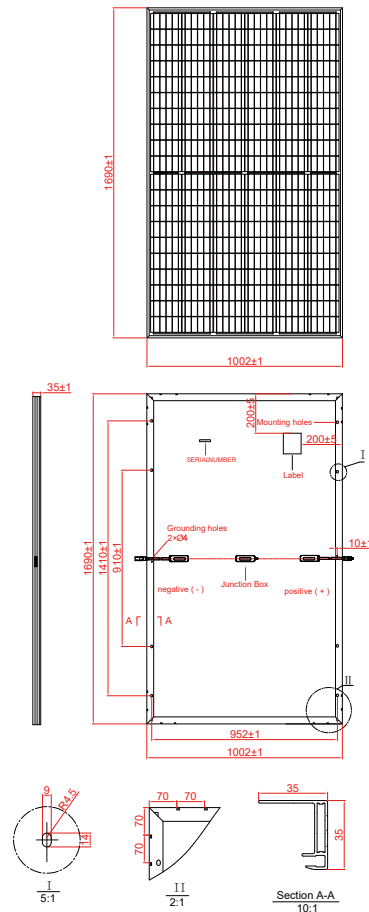
Mechanical Specifications

| | |
|---------------------|--|
| External Dimensions | 1690 x 1002 x 35 mm |
| Weight | 19.0kg |
| Solar Cells | PERC Mono crystalline 158.75 x 79.375 mm (120pcs) |
| Front Glass | 3.2 mm AR coating tempered glass, low iron |
| Frame | Anodized aluminium alloy |
| Junction Box | IP68, 3 diodes |
| Output Cable | 4.0 mm ² , Portrait: 255mm(+)/355mm(-); Landscape: 1200mm |
| Connector | MC4 Compatible |
| Mechanical Load | 5400 Pa |

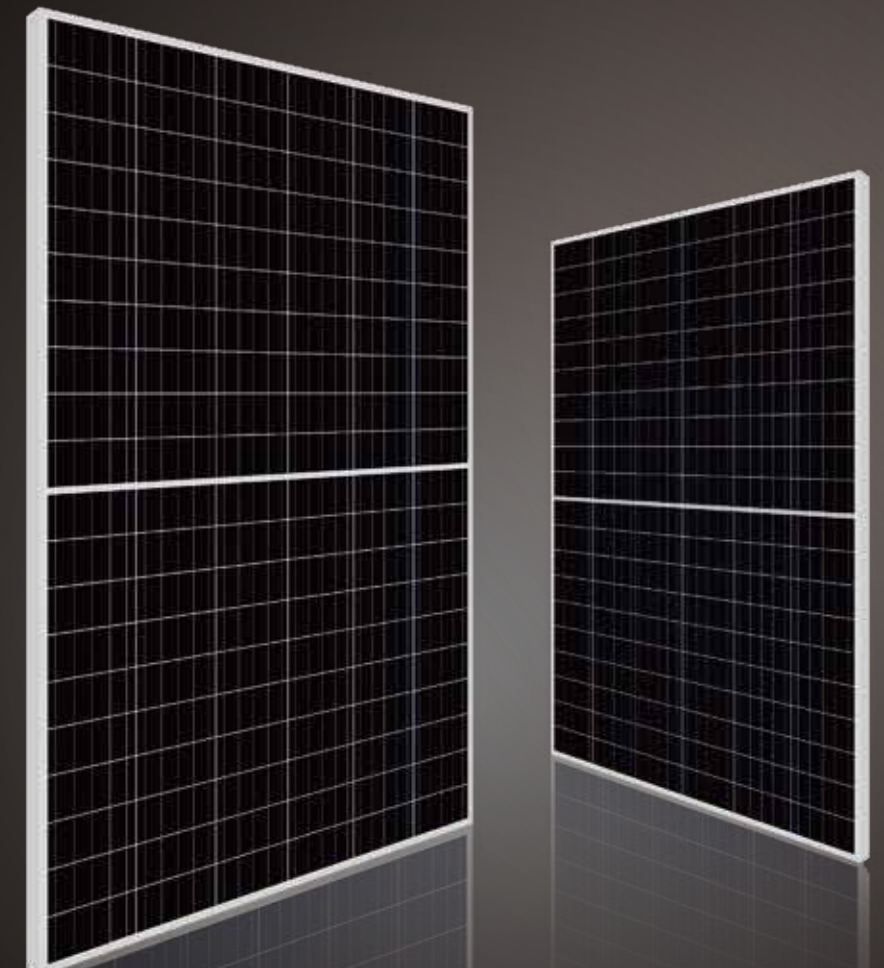
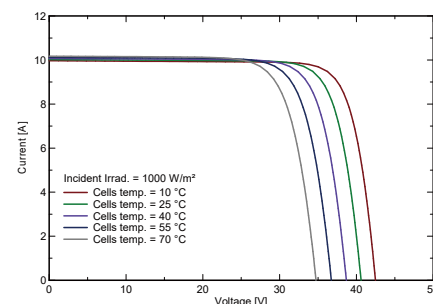
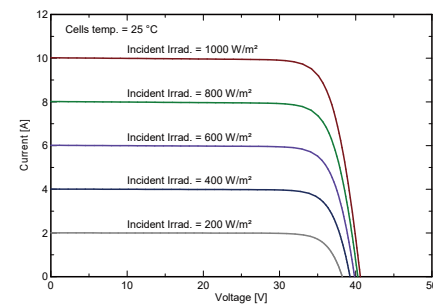
Packing Configuration

| | 1690 x 1002 x 35 mm | | |
|-----------------------|---------------------|-------|-------|
| Container | 20'GP | 40'GP | 40'HQ |
| Pieces per Pallet | 30 | 30 | 30+2* |
| Pallets per Container | 12 | 26 | 26 |
| Pieces per Container | 360 | 780 | 832 |

* 30+2 pieces per pallet is the special package which only suits for container transport.
 For details, please consult SERAPHIM.



I-V Curve



BIADÉ™
 Cuts Night, Breaks Dawn.

315W-330W

Blade™ – A Module re-Modeled

Seraphim's Blade™ Series solar module boasts two identical parts, which are composed of cells that are half the size of ordinary solar cells. By cutting cells into halves, these smaller currents will help reduce "Cell To Module" loss, which means higher output.

In the meantime, the overall space between cells are doubled, and more light will be transferred into power through multiple reflections. Compared to mainstream standard modules, the Blade™ series module has lower current and series resistance which helps minimize mismatch loss, internal power loss, and shadow effect, etc. Once one cell has EL defect or appearance defect, such as black edge or V sharp. After cutting, one intact half can be reused.



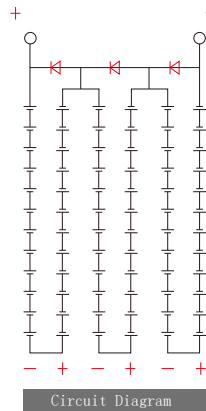
Less Mismatch loss

Instead of 6 internal strings of cells, the Blade series module has 2 x 6 shorter ones. This design effectively deals with the mismatch happened between cells caused by shadow, out of sync performance degradation, ect.

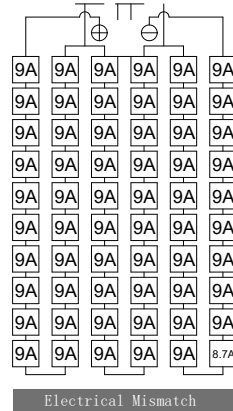
Standard Module / With 6 internal strings of cells



Design Sketch



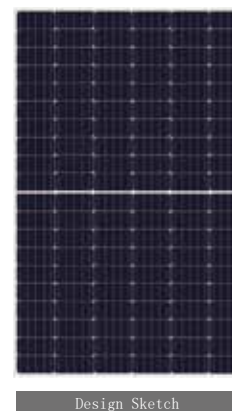
Circuit Diagram



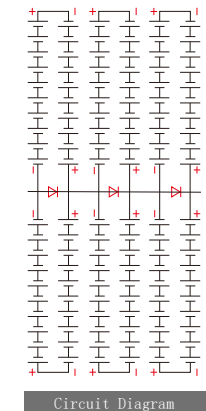
Electrical Mismatch

Module current output is 8.7A, current mismatch in series is **0.3A**.

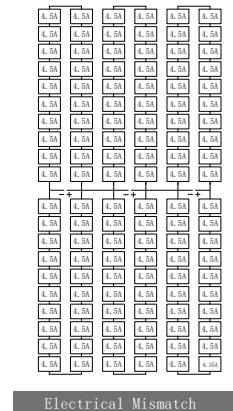
Blade™ / With 2 x 6 internal strings of cells



Design Sketch



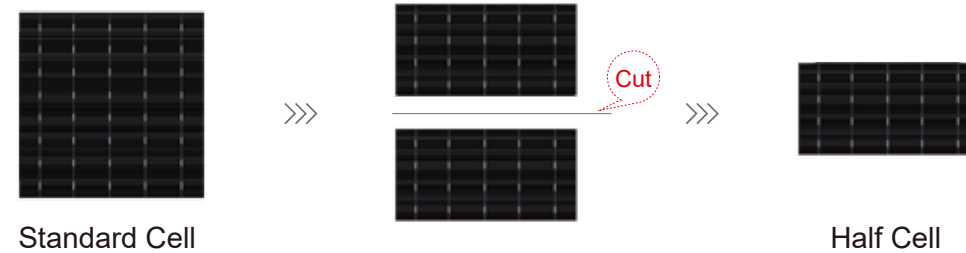
Circuit Diagram



Electrical Mismatch

Module current output is 4.5+4.35=8.85A, current mismatch in series is **0.15A**.

Less Internal Power Loss



Standard Cell

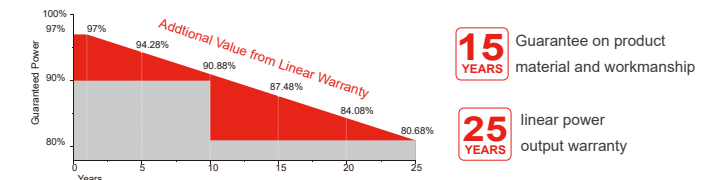
Half Cell

The ribbon length of half-cell is shorter than normal cell. Calculated by Joule's law and Ohm' law, the power loss reduction is nearly 6%.

Product Certificates



Warranty



Insurance PICC

Higher Yield Due to Better Shading Response

Blade™ comprises two separated and identical solar cell arrays, which means the ordinary strings of cells are cut into halves, and these shorter strings compose arrays which has separated current paths. When a module is shaded, only one side shaded array's current will be impacted, while the other array will still be functionally producing power. Under this circumstance, when a module is shaded, the affected working areas of Blade™ will be 50% less.

By cutting solar cell into halves, the internal power loss will be lower and hot spot effect will also be reduced.

Standard Module

Blade™ Module

