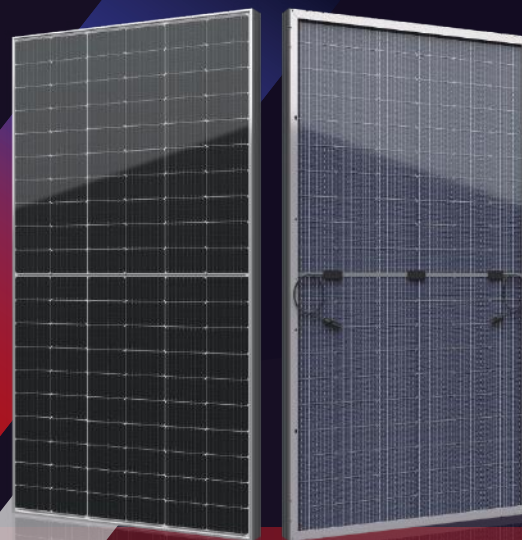


# SIV SERIES

Small Changes, Big Accomplishments

## 445-460W



### • SIV SERIES

Seraphim redefined the high-efficiency module series by integrating 182mm silicon wafers with multi-busbar and half-cut cell technologies. Seraphim panel combined creative technology effectively and extremely improved the module efficiency and power output.

### • KEY FEATURES

-  Less mismatch to get more power
-  Less power loss by minimizing the shading impact
-  Competitive low light performance
-  3 times EL test to ensure best quality
-  Ideal choice for utility and commercial scale projects by reduced BoS and improved ROI
-  Outstanding reliability proven by PVEL for stringent environment condition:
  - Sand, acid, salt and hail stones
  - 2400 Pa wind load and 5400 Pa snow load
  - Anti-PID

### • QUALITY SYSTEM

ISO9001 / ISO14001 / ISO45001

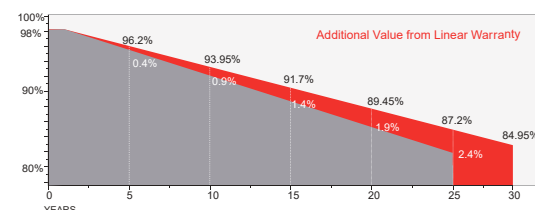
### • PRODUCT CERTIFICATION



### • INSURANCE



### • WARRANTY



Guarantee on product material and workmanship



Linear power output warranty



**JIANGSU SERAPHIM SOLAR SYSTEM CO., LTD**

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 Tel: +86-519-68788166 Email: [info@seraphim-energy.com](mailto:info@seraphim-energy.com)

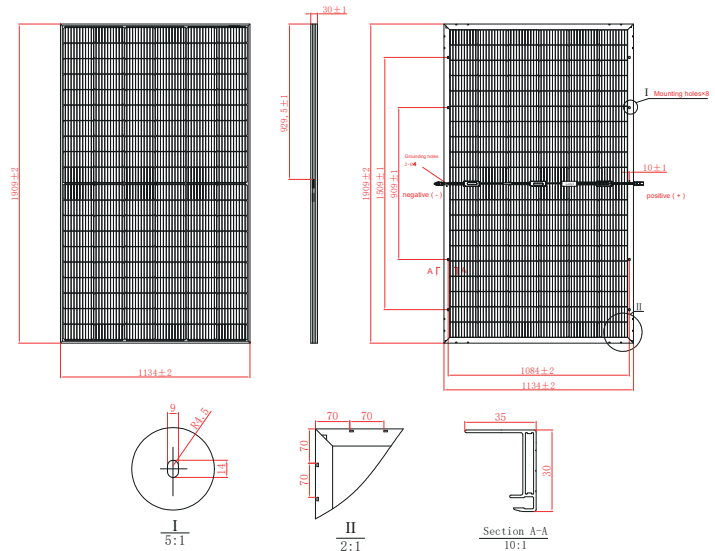
## Mechanical Specifications

|                    |                                                             |
|--------------------|-------------------------------------------------------------|
| External Dimension | 1909 x 1134 x 30 mm                                         |
| Weight             | 27.3 kg                                                     |
| Solar Cells        | PERC Mono crystalline(120 pcs)                              |
| Front / Back Glass | 2.0mm AR coating semi-tempered glass, low iron              |
| Frame              | Anodized aluminium alloy                                    |
| Junction Box       | IP68, 3 diodes                                              |
| Output Cables      | 4.0mm <sup>2</sup> , 250mm(+)/350mm(-) or Customized Length |

## Packing Configuration

|                       |       |       |
|-----------------------|-------|-------|
| Container             | 20'GP | 40'HQ |
| Pieces per Pallet     | 32    | 32    |
| Pallets per Container | 5     | 24    |
| Pieces per Container  | 160   | 768   |

## Technical drawing



## Electrical Characteristics

| Module Type                                | SRP-445-BMB-BG |            |          | SRP-450-BMB-BG |            |          | SRP-455-BMB-BG |            |          | SRP-460-BMB-BG |            |          |
|--------------------------------------------|----------------|------------|----------|----------------|------------|----------|----------------|------------|----------|----------------|------------|----------|
|                                            | Front STC      | Front NOCT | Back STC | Front STC      | Front NOCT | Back STC | Front STC      | Front NOCT | Back STC | Front STC      | Front NOCT | Back STC |
| Maximum Power -P <sub>mp</sub> (W)         | 445            | 333        | 312      | 450            | 337        | 315      | 455            | 341        | 319      | 460            | 345        | 322      |
| Open Circuit Voltage -V <sub>oc</sub> (V)  | 41.22          | 38.41      | 41.20    | 41.32          | 38.57      | 41.30    | 41.42          | 38.67      | 41.40    | 41.52          | 38.77      | 41.50    |
| Short Circuit Current -I <sub>sc</sub> (A) | 13.66          | 11.04      | 9.63     | 13.76          | 11.12      | 9.70     | 13.86          | 11.20      | 9.77     | 13.96          | 11.28      | 9.84     |
| Maximum Power Voltage -V <sub>mp</sub> (V) | 34.18          | 31.82      | 34.22    | 34.28          | 31.98      | 34.29    | 34.38          | 32.06      | 34.42    | 34.48          | 32.18      | 34.49    |
| Maximum Power Current -I <sub>mp</sub> (A) | 13.03          | 10.48      | 9.12     | 13.13          | 10.56      | 9.19     | 13.24          | 10.64      | 9.27     | 13.34          | 10.73      | 9.34     |
| Module Efficiency STC-η <sub>m</sub> (%)   | 20.56          |            |          | 20.79          |            |          | 21.02          |            |          | 21.25          |            |          |
| Power Tolerance (W)                        | (0, +4.99)     |            |          |                |            |          |                |            |          |                |            |          |
| Pmax Temperature Coefficient               | -0.34 %/°C     |            |          |                |            |          |                |            |          |                |            |          |
| Voc Temperature Coefficient                | -0.26 %/°C     |            |          |                |            |          |                |            |          |                |            |          |
| Isc Temperature Coefficient                | +0.05 %/°C     |            |          |                |            |          |                |            |          |                |            |          |

STC: Irradiance 1000 W/m<sup>2</sup> module temperature 25°C AM=1.5  
Power measurement tolerance: +/-3%

## Rear Side Power Gain(SRP-450-BMB-BG)

|                                            |       |       |       |       |       |
|--------------------------------------------|-------|-------|-------|-------|-------|
| Power Gain                                 | 10%   | 15%   | 20%   | 25%   | 30%   |
| Maximum Power -P <sub>mp</sub> (W)         | 495   | 518   | 540   | 563   | 585   |
| Open Circuit Voltage -V <sub>oc</sub> (V)  | 41.32 | 41.32 | 41.32 | 41.32 | 41.32 |
| Short Circuit Current -I <sub>sc</sub> (A) | 15.14 | 15.82 | 16.51 | 17.20 | 17.89 |
| Maximum Power Voltage -V <sub>mp</sub> (V) | 34.28 | 34.28 | 34.28 | 34.28 | 34.28 |
| Maximum Power Current -I <sub>mp</sub> (A) | 14.44 | 15.10 | 15.76 | 16.41 | 17.07 |

## Application Conditions

|                                    |                                        |
|------------------------------------|----------------------------------------|
| Maximum System Voltage             | 1500V DC                               |
| Maximum Series Fuse Rating         | 25 A                                   |
| Operating Temperature              | -40~+85 °C                             |
| Nominal Operating Cell Temperature | 45±2 °C                                |
| Bifaciality                        | 70%±10%                                |
| Mechanical Load                    | Front side 5400 Pa / Back side 2400 Pa |

## I-V Curve

