

# SIII SERIES

Multiple upgrades were forged into one

## 435-450<sub>w</sub>



### ● SIII SERIES

Seraphim Energy Group (SEG) redefined the high-efficiency module series by integrating 166mm silicon wafers with multi-busbar and half-cut cell technologies. SEG 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 improve ROI
- Outstanding reliability proven by PVEL for stringent environment condition :
  - Sand, acid, salt, and hail stones
  - 2400pa wind load and 5400pa snow load
  - Anti-PID

### ● QUALITY SYSTEM

ISO19001 / ISO14001 / OHSAS18001

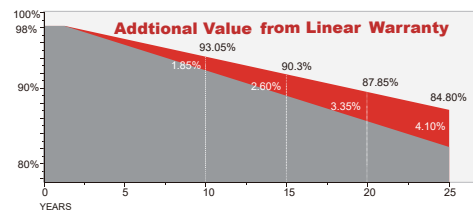
### ● PRODUCT CERTIFICATION



### ● INSURANCE



### ● WARRANTY



Guarantee on product material and workmanship



linear power output warranty



## Electrical Characteristics

| Module Type                         | SEG-435-BMA-HV |      | SEG-440-BMA-HV |      | SEG-445-BMA-HV |      | SEG-450-BMA-HV |      |
|-------------------------------------|----------------|------|----------------|------|----------------|------|----------------|------|
|                                     | STC            | NOCT | STC            | NOCT | STC            | NOCT | STC            | NOCT |
| Maximum Power at STC (Pmp)          | 435            | 324  | 440            | 328  | 445            | 332  | 450            | 336  |
| Open Circuit Voltage (Voc)          | 49.6           | 45.3 | 49.7           | 45.4 | 49.9           | 45.6 | 50.1           | 45.8 |
| Short Circuit Current (Isc)         | 11.18          | 9.02 | 11.27          | 9.10 | 11.34          | 9.17 | 11.41          | 9.24 |
| Maximum Power Voltage (Vmp)         | 41.3           | 38.2 | 41.4           | 38.3 | 41.6           | 38.5 | 41.8           | 38.7 |
| Maximum Power Current (Imp)         | 10.54          | 8.49 | 10.63          | 8.57 | 10.70          | 8.63 | 10.77          | 8.69 |
| Module Efficiency at STC( $\eta$ m) | 20.01          |      | 20.24          |      | 20.47          |      | 20.70          |      |
| Power Tolerance                     | (0, +3%)       |      |                |      |                |      |                |      |
| Maximum System Voltage              | 1500V DC       |      |                |      |                |      |                |      |
| Maximum Series Fuse Rating          | 20 A           |      |                |      |                |      |                |      |

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

## Temperature Characteristics

|   |              |
|---|--------------|
| Pmax Temperature Coefficient              | -0.35 %/°C   |
| Voc Temperature Coefficient               | -0.27 %/°C   |
| Isc Temperature Coefficient               | +0.05 %/°C   |
| Operating Temperature                     | -40 ~ +85 °C |
| Nominal Operating Cell Temperature (NOCT) | 45 ± 2 °C    |

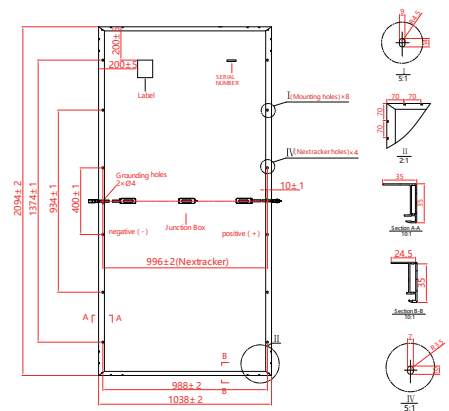
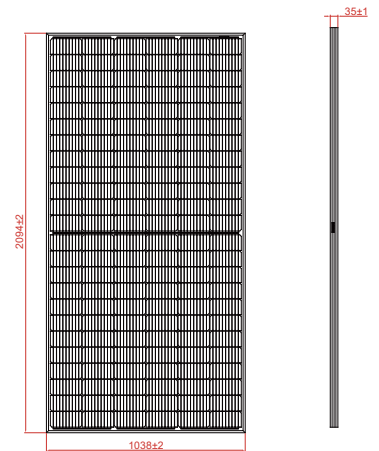
## Mechanical Specifications

|                     |  |
|---------------------|--|
| External Dimensions | 2094x 1038 x 35 mm   |
| Weight              | 23.5 kg  |
| Solar Cells         | PERC Mono 166 x 83mm (144 pcs)                               |
| Front Glass         | 3.2 mm AR coating tempered glass, low iron                   |
| Frame               | Anodized aluminum alloy                                      |
| Junction Box        | IP68, 3 diodes   |
| Output Cables       | 4.0 mm <sup>2</sup> , 250mm(+)/350mm(-) or Customized Length |
| Mechanical Load     | Front side 5400Pa / Rear side 2400Pa                         |

## Packing Configuration

|                       | 2094 x 1038 x 35 mm |       |
|-----------------------|---------------------|-------|
| Container             | 20'GP               | 40'HQ |
| Pieces per Pallet     | 31                  | 31    |
| Pallets per Container | 5                   | 22    |
| Pieces per Container  | 155                 | 682   |

For details, please consult SEG.



## I-V Curve

