

# Seco 440-465w

High efficiency bifacial modules

**PERC**

**182mm**

## • PERC MODULE ADVANTAGE



Less mismatch to  
get more power



Less power loss by  
minimizing the  
shading impact



Excellent  
low-light  
performance



Low BOS and  
LCOE



3 times EL test  
to ensure best  
quality



Superior load capacity  
2400 Pa wind load &  
5400 Pa snow load

## • QUALITY SYSTEM

ISO9001 / ISO14001 / ISO45001

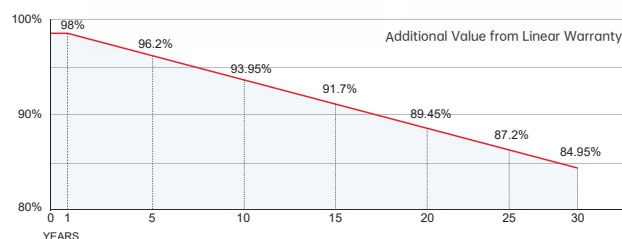
## • PRODUCT CERTIFICATION



## • INSURANCE

**PICC**

## • WARRANTY



Guarantee on product  
material and workmanship



Linear power  
output warranty



**SERAPHIM ENERGY GROUP CO., LTD.**

Add: NO.18, Shichuan Road, Jinzhai Economic Development Zone, Lu'an City, Anhui Province  
 Tel: +86-564-7736177 Email: [info@seraphim-energy.com](mailto:info@seraphim-energy.com)

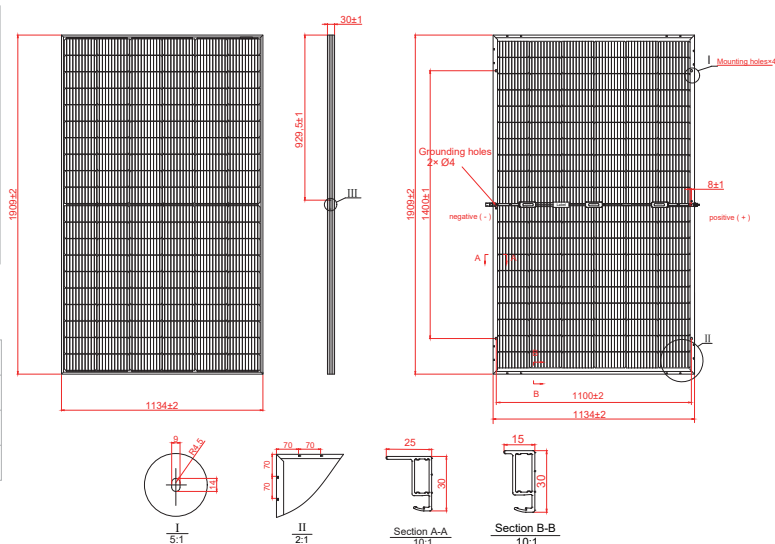
## Mechanical Specifications

|                    |                                                             |
|--------------------|-------------------------------------------------------------|
| 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     | 36    | 36    |
| Pallets per Container | 5     | 24    |
| Pieces per Container  | 180   | 864   |

## Technical drawing



## Electrical Characteristics

| Module Type                                | SRP-440-BMB-BG |            | SRP-445-BMB-BG |            | SRP-450-BMB-BG |            | SRP-455-BMB-BG |            | SRP-460-BMB-BG |            | SRP-465-BMB-BG |            |
|--------------------------------------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|------------|
|                                            | Front STC      | Front BNPI | Front STC      | Front BNPI | Front STC      | Front BNPI | Front STC      | Front BNPI | Front STC      | Front BNPI | Front STC      | Front BNPI |
| Maximum Power -P <sub>mp</sub> (W)         | 440            | 482        | 445            | 487        | 450            | 493        | 455            | 498        | 460            | 503        | 465            | 509        |
| Open Circuit Voltage -V <sub>oc</sub> (V)  | 41.12          | 41.32      | 41.22          | 41.42      | 41.32          | 41.52      | 41.42          | 41.62      | 41.52          | 41.72      | 41.62          | 41.82      |
| Short Circuit Current -I <sub>sc</sub> (A) | 13.56          | 14.84      | 13.66          | 14.95      | 13.76          | 15.06      | 13.86          | 15.17      | 13.96          | 15.28      | 14.06          | 15.39      |
| Maximum Power Voltage -V <sub>mp</sub> (V) | 34.08          | 34.06      | 34.18          | 34.15      | 34.28          | 34.27      | 34.38          | 34.37      | 34.48          | 34.48      | 34.60          | 34.60      |
| Maximum Power Current -I <sub>mp</sub> (A) | 12.92          | 14.14      | 13.03          | 14.26      | 13.13          | 14.37      | 13.24          | 14.49      | 13.34          | 14.60      | 13.44          | 14.71      |
| Module Efficiency STC-η <sub>m</sub> (%)   | 20.33          |            | 20.56          |            | 20.79          |            | 21.02          |            | 21.25          |            | 21.48          |            |
| Power Tolerance (W)                        | (0, +4.99)     |            |                |            |                |            |                |            |                |            |                |            |

STC: Irradiance 1000 W/m<sup>2</sup> module temperature 25°C AM=1.5 Power measurement tolerance: +/-3%; Voltage measurement tolerance: +/-3%; Current measurement tolerance: +/-4%  
BNPI: front 1000 W/m<sup>2</sup> rear 135 W/m<sup>2</sup> Power measurement tolerance: +/-3%; Voltage measurement tolerance: +/-3%; Current measurement tolerance: +/-4%

## 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 |

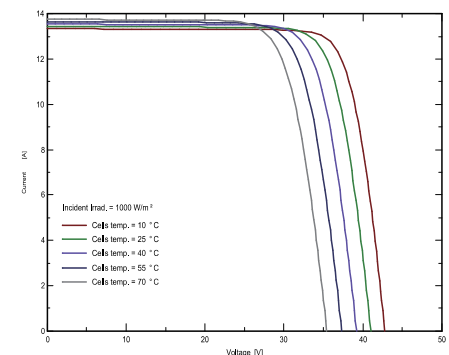
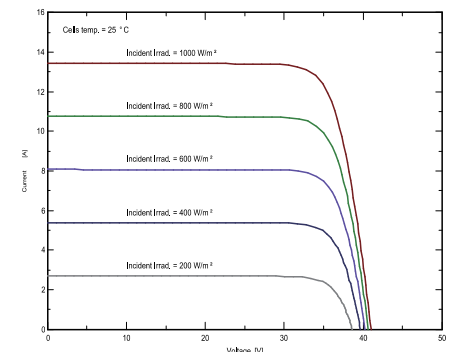
## Temperature Ratings

|                              |            |
|------------------------------|------------|
| Pmax Temperature Coefficient | -0.34 %/°C |
| Voc Temperature Coefficient  | -0.26 %/°C |
| Isc Temperature Coefficient  | +0.05 %/°C |

## 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



Specifications are subject to change without further notification SRP-DS-EN-2025V1.1 © Copyright 2025 Seraphim

**SERAPHIM ENERGY GROUP CO., LTD.**

Add: NO.18, Shichuan Road, Jinzhai Economic Development Zone, Lu'an City, Anhui Province  
Tel: +86-564-7736177 Email: info@seraphim-energy.com

