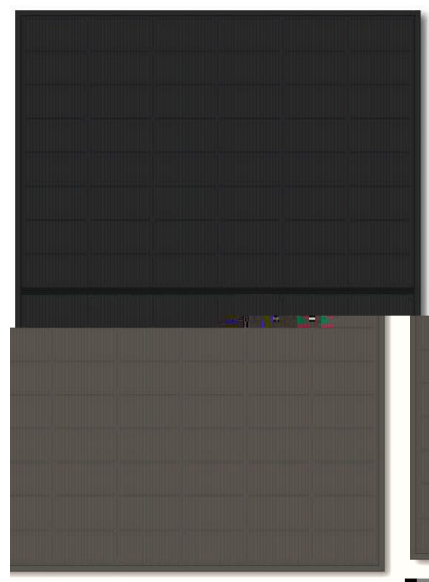


Maximum module efficiency

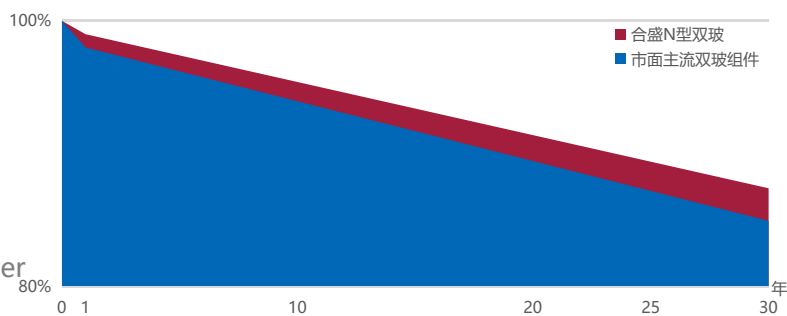


12

- 12-year product warranty
- 1% 1st-year power degradation

30

- 30-year linear power warranty
- 0.4% annual power degradation



IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality Management System (QMS)

ISO14001:2015: Environmental Management System

ISO45001:2018:Occupational Health and Safety Management System



## Mechanical Parameters

|                     |                                                 |
|---------------------|-------------------------------------------------|
| Cell type           | N-type Monocrystalline solar cells              |
| Number of half cell | 96 (6×16)                                       |
| Dimensions          | 1762×1134×30mm                                  |
| Weight              | 20.9kg                                          |
| Front Glass         | 1.6mm anti-reflective coating glass             |
| Back Glass          | 1.6mm Heat-strengthened glass                   |
| Frame               | Anodized aluminum alloy                         |
| Junction box        | IP68                                            |
| Output cable        | 4.0mm <sup>2</sup> ; + 400/-200mm or customised |
| Size of each pallet | 1778×1140×1250mm                                |

## Electrical performance parameters

Module Type

HS-48TBB 435-455-S7

| Test Condition                                        | STC            | NOCT  | STC   | NOCT  | STC   | NOCT  | STC   | NOCT  | STC   | NOCT  |
|-------------------------------------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Power (Pmax/W)                                | 435            | 355   | 440   | 359   | 445   | 363   | 450   | 368   | 455   | 372   |
| Optimum Operating Voltage (Vmp/V)                     | 29.45          | 29.32 | 29.58 |       | 29.71 | 29.69 | 29.84 | 29.86 | 29.97 | 30.03 |
| Optimum Operating Current (Imp/A)                     | 14.77          | 12.10 | 14.87 | 12.17 | 14.98 | 12.24 | 15.08 | 12.31 | 15.18 | 12.38 |
| Open Circuit Voltage (Voc/V)                          | 34.71          | 34.81 | 34.88 | 34.98 | 35.05 | 35.15 | 35.22 | 35.32 | 35.39 | 35.49 |
| Short Circuit Current (Isc/A)                         | 15.88          | 12.68 | 15.96 | 12.74 | 16.04 | 12.80 | 16.12 | 12.86 | 16.20 | 12.92 |
| Module Efficiency (%)                                 | 21.8%          |       | 22.0% |       | 22.3% |       | 22.5% |       | 22.8% |       |
| Operating Temperature Range (°C)                      | -40°C ~ +85°C  |       |       |       |       |       |       |       |       |       |
| Maximum System Voltage                                | 1500V DC (IEC) |       |       |       |       |       |       |       |       |       |
| Maximum Rated Fuse Current                            | 25A            |       |       |       |       |       |       |       |       |       |
| Power Tolerance                                       | 0~+5W          |       |       |       |       |       |       |       |       |       |
| Temperature Coefficient of peak power (Pmax)          | -0.29%/°C      |       |       |       |       |       |       |       |       |       |
| Temperature Coefficient of open circuit voltage(Voc)  | -0.25%/°C      |       |       |       |       |       |       |       |       |       |
| Temperature Coefficient of short-circuit current(Isc) | 0.043%/°C      |       |       |       |       |       |       |       |       |       |
| Nominal Operating Temperature of cell (NOTC)          | 45±2°C         |       |       |       |       |       |       |       |       |       |
| Bifaciality(BiFi)                                     | 80±%           |       |       |       |       |       |       |       |       |       |

## Parameters of bifacial power generation (Backside Power Gain)

|     |                      |       |       |       |       |       |
|-----|----------------------|-------|-------|-------|-------|-------|
| 5%  | Maximum power(Pmax)  | 457Wp | 462Wp | 467Wp | 473Wp | 478Wp |
|     | Module efficiency(%) | 22.9% | 23.1% | 23.4% | 23.6% | 23.9% |
| 10% | Maximum power(Pmax)  | 479Wp | 484Wp | 490Wp | 495Wp | 501Wp |
|     | Module efficiency(%) | 23.9% | 24.2% | 24.5% | 24.8% | 25.0% |
| 15% | Maximum power(Pmax)  | 500Wp | 506Wp | 512Wp | 518Wp | 523Wp |
|     | Module efficiency(%) | 25.0% | 25.3% | 25.6% | 25.9% | 26.2% |