

cell

Perc



KEY F

ES



m  
t System  
Safety



Performance Warranty

20 25

## ELECTRICAL CHARACTERISTICS

| Testing Condition             | STC   | NMOT  | STC   | NMOT  | STC   | NMOT  | STC   | NMOT  | STC   | NMOT  |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Maximum Power (Pmax/W)        | 650   | 492   | 655   | 495   | 660   | 499   | 665   | 503   | 670   | 507   |
| Operating Voltage (Vmpp/V)    | 37.8  | 35.4  | 38.0  | 35.6  | 38.2  | 35.8  | 38.4  | 36.0  | 38.6  | 36.1  |
| Operating Current (Impp/A)    | 17.20 | 13.88 | 17.24 | 13.91 | 17.28 | 13.95 | 17.32 | 13.99 | 17.36 | 14.02 |
| Open-Circuit Voltage (Voc/V)  | 45.4  | 42.9  | 45.6  | 43.1  | 45.8  | 43.3  | 46.0  | 43.5  | 46.2  | 43.7  |
| Short-Circuit Current (Isc/A) | 18.29 | 14.74 | 18.33 | 14.77 | 18.37 | 14.81 | 18.41 | 14.84 | 18.45 | 14.87 |
| Module Efficiency (%)         | 20.90 |       | 21.10 |       | 21.30 |       | 21.40 |       | 21.60 |       |

STC: Irradiance 1000W/m<sup>2</sup>, Spectra at AM1.5, Module Temperature 25 °C. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%  
 NMOT: Irradiance 800W/m<sup>2</sup>, Spectra at AM1.5, Ambient Temperature 20 °C, Wind speed 1m/s

## MECHANICAL CHARACTERISTICS

|                   |   |
|-------------------|---|
| Cell Type         | Monocrystalline Silicon (12Busbar)  |
| No. of Cells      | 132pcs in series (6*22)   |
| Module Dimensions | 2384*1303*35mm<br>(93.86*51.30*1.38inches)                                |
| Weight            | 34.5kg (76.06lbs.)  |
| Front Glass       | 3.2mm AR Coating Tempered Glass   |
| Frame             | Anodized Aluminium Alloy  |
| Junction Box      | IP68, 3 Bypass Diodes   |
| Output Cables     | 4mm <sup>2</sup> (IEC), 12AWG(UL)<br>300mm in Length or Customized Length |
| Connectors        | T01/LJQ-3-CSY/MC4/MC4-EVO2  |

## APPLICATION CONDITIONS

|                              |                |
|------------------------------|----------------|
| Maximum System Voltage       | 1000V/1500V/DC |
| Operating Temperature        | -40°C~+85°C    |
| Maximum Series Fuse          | 30A            |
| Safety Protection Class      | Class II       |
| Mechanical Load (Front side) | 5400Pa         |
| Mechanical Load (Back side)  | 2400Pa         |

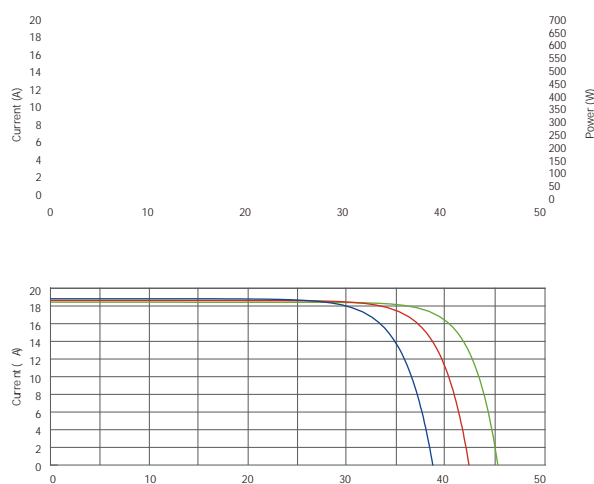
## TEMPERATURE CHARACTERISTICS

|  |            |
|--|------------|
| Temperature Coefficient of Pmax            | -0.34%/°C  |
| Temperature Coefficient of Voc             | -0.25%/°C  |
| Temperature Coefficient of Isc             | +0.046%/°C |
| Nominal Module Operating Temperature(NMOT) | 43±2°C     |

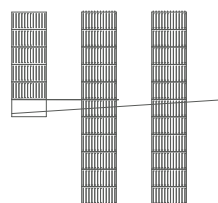
## PACKING CONFIGURATION

|                             |     |         |
|-----------------------------|-----|---------|
| Pieces Per Pallet           | 31  | 31(USA) |
| Pieces Per Container(40'HQ) | 558 | 527     |

## I-V CURVE



## TECHNICAL DRAWINGS



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