

## DEEP BLUE 3.0 Light

Mono

405W MBB  
Half-cell Black Module  
JAM54S31 380-405/MR Series

### Introduction

Assembled with 11BB PERC cells, the half-cell configuration of the modules offers the advantages of higher power output, better temperature-dependent performance, reduced shading effect on the energy generation, lower risk of hot spot, as well as enhanced tolerance for mechanical loading.



Higher output power



Lower LCOE



Less shading and lower resistive loss

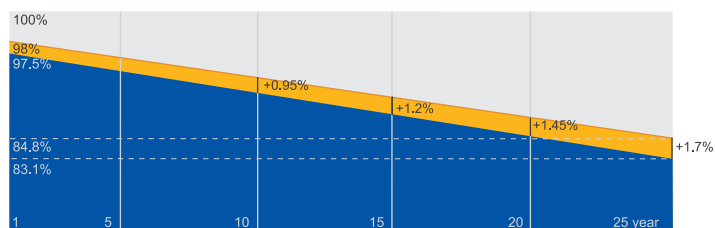


Better mechanical loading tolerance

### Superior Warranty

- 12-year product warranty
- 25-year linear power output warranty

0.55% Annual Degradation  
Over 25 years



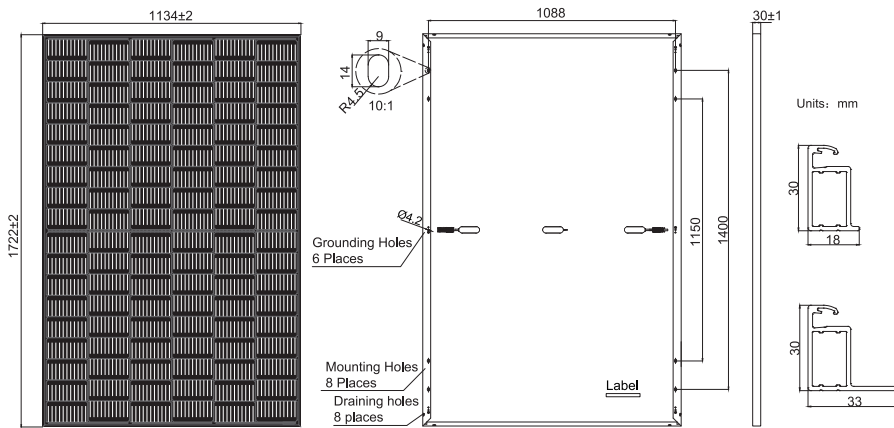
■ New linear power warranty ■ Standard module linear power warranty

### Comprehensive Certificates

- IEC 61215, IEC 61730, UL 61215, UL 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- ISO 45001: 2018 Occupational health and safety management systems
- IEC 62941: 2019 Terrestrial photovoltaic (PV) modules - Quality system for PV module manufacturing



## MECHANICAL DIAGRAMS



Remark: customized frame color and cable length available upon request

## SPECIFICATIONS

|                                    |                                                                                               |
|------------------------------------|-----------------------------------------------------------------------------------------------|
| Cell                               | Mono                                                                                          |
| Weight                             | 19.5kg                                                                                        |
| Dimensions                         | 1722±2mm×1134±2mm×30±1mm                                                                      |
| Cable Cross Section Size           | 4mm <sup>2</sup> (IEC) , 12 AWG(UL)                                                           |
| No. of cells                       | 108(6x18)                                                                                     |
| Junction Box                       | IP68, 3 diodes                                                                                |
| Connector                          | QC 4.10-35/ MC4-EVO2A                                                                         |
| Cable Length (Including Connector) | Portrait: 200mm(+)/300mm(-);<br>800mm(+)/800mm(-)(Leapfrog)<br>Landscape: 1100mm(+)/1100mm(-) |
| Front Glass                        | 2.8mm                                                                                         |
| Packaging Configuration            | 36pcs/Pallet<br>936pcs/40HQ Container                                                         |

## ELECTRICAL PARAMETERS AT STC

| TYPE                                                            | JAM54S31<br>-380/MR                                             | JAM54S31<br>-385/MR | JAM54S31<br>-390/MR | JAM54S31<br>-395/MR | JAM54S31<br>-400/MR | JAM54S31<br>-405/MR |
|-----------------------------------------------------------------|-----------------------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Rated Maximum Power(P <sub>max</sub> ) [W]                      | 380                                                             | 385                 | 390                 | 395                 | 400                 | 405                 |
| Open Circuit Voltage(V <sub>oc</sub> ) [V]                      | 36.58                                                           | 36.71               | 36.85               | 36.98               | 37.07               | 37.23               |
| Maximum Power Voltage(V <sub>mp</sub> ) [V]                     | 30.28                                                           | 30.46               | 30.64               | 30.84               | 31.01               | 31.21               |
| Short Circuit Current(I <sub>sc</sub> ) [A]                     | 13.44                                                           | 13.52               | 13.61               | 13.70               | 13.79               | 13.87               |
| Maximum Power Current(I <sub>mp</sub> ) [A]                     | 12.55                                                           | 12.64               | 12.73               | 12.81               | 12.90               | 12.98               |
| Module Efficiency [%]                                           | 19.5                                                            | 19.7                | 20.0                | 20.2                | 20.5                | 20.7                |
| Power Tolerance                                                 | 0~+5W                                                           |                     |                     |                     |                     |                     |
| Temperature Coefficient of I <sub>sc</sub> (α <sub>Isc</sub> )  | +0.045%/°C                                                      |                     |                     |                     |                     |                     |
| Temperature Coefficient of V <sub>oc</sub> (β <sub>Voc</sub> )  | -0.275%/°C                                                      |                     |                     |                     |                     |                     |
| Temperature Coefficient of P <sub>max</sub> (γ <sub>Pmp</sub> ) | -0.350%/°C                                                      |                     |                     |                     |                     |                     |
| STC                                                             | Irradiance 1000W/m <sup>2</sup> , cell temperature 25°C, AM1.5G |                     |                     |                     |                     |                     |

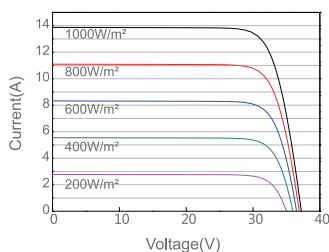
Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer.They only serve for comparison among different module types.

## ELECTRICAL PARAMETERS AT NOCT

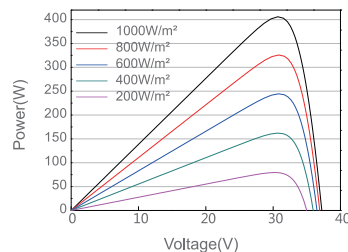
| TYPE                                        | JAM54S31<br>-380/MR                                                               | JAM54S31<br>-385/MR | JAM54S31<br>-390/MR | JAM54S31<br>-395/MR | JAM54S31<br>-400/MR | JAM54S31<br>-405/MR | OPERATING CONDITIONS                                    |                                                                 |
|---------------------------------------------|-----------------------------------------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------------------------------------------|-----------------------------------------------------------------|
| Rated Max Power(P <sub>max</sub> ) [W]      | 286                                                                               | 290                 | 294                 | 298                 | 302                 | 306                 | Maximum System Voltage                                  | 1000V/1500V DC                                                  |
| Open Circuit Voltage(V <sub>oc</sub> ) [V]  | 34.36                                                                             | 34.49               | 34.62               | 34.75               | 34.88               | 35.12               | Operating Temperature                                   | -40 °C ~+85 °C                                                  |
| Max Power Voltage(V <sub>mp</sub> ) [V]     | 28.51                                                                             | 28.68               | 28.87               | 29.08               | 29.26               | 29.47               | Maximum Series Fuse Rating                              | 25A                                                             |
| Short Circuit Current(I <sub>sc</sub> ) [A] | 10.75                                                                             | 10.82               | 10.89               | 10.96               | 11.03               | 11.10               | Maximum Static Load,Front*<br>Maximum Static Load,Back* | 5400Pa(112lb/ft <sup>2</sup> )<br>2400Pa(50lb/ft <sup>2</sup> ) |
| Max Power Current(I <sub>mp</sub> ) [A]     | 10.03                                                                             | 10.11               | 10.18               | 10.25               | 10.32               | 10.38               | NOCT                                                    | 45±2 °C                                                         |
| NOCT                                        | Irradiance 800W/m <sup>2</sup> , ambient temperature 20°C,wind speed 1m/s, AM1.5G |                     |                     |                     |                     |                     | Safety Class                                            | Class II                                                        |
|                                             |                                                                                   |                     |                     |                     |                     |                     | Fire Performance                                        | UL Type 1                                                       |

## CHARACTERISTICS

Current-Voltage Curve JAM54S31-405/MR



Power-Voltage Curve JAM54S31-405/MR



Current-Voltage Curve JAM54S31-405/MR

