

## DEEP BLUE 4.0

**Mono**

435W n-type Bifacial Double Glass  
High Efficiency Mono Module  
JAM54D40 410-435/GB Series

### Introduction

Powered by the latest SMBB n-type solar cell and half-cell configuration, these modules have higher output power, lower LID, better weak illumination response, and better temperature coefficient.



Higher power generation  
better LCOE



n-type with very Lower LID



Better weak illumination response



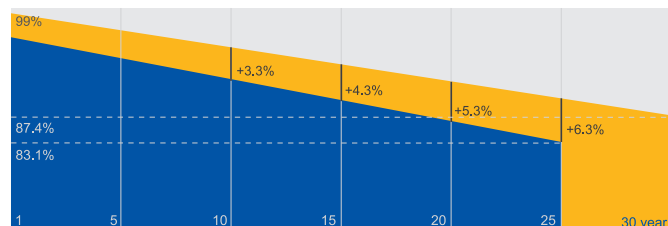
Better Temperature Coefficient

### Superior Warranty

- 25-year product warranty\*
- 30-year linear power output warranty

1% 1st-year Degradation

0.4% Annual Degradation  
Over 30 years



n-type Bifacial Double Glass Module  
Linear Performance Warranty

Standard Module Linear  
Performance Warranty

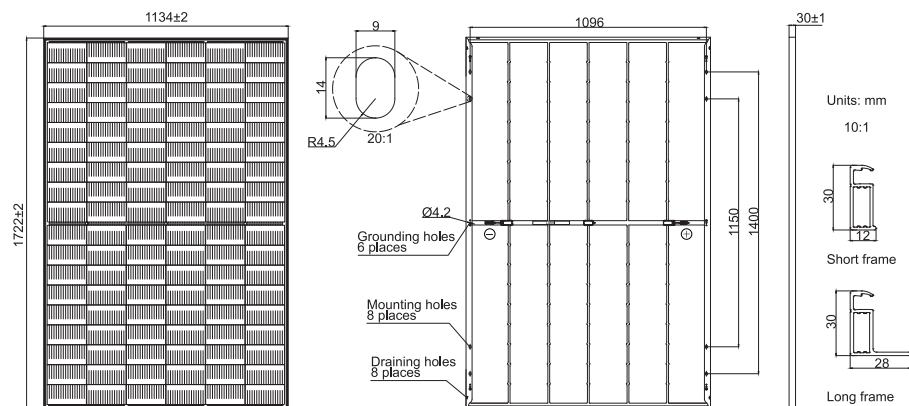
\*Subject to the terms and conditions contained in the Limited Warranty Statement.  
Also this 25-year limited product warranty is available only for products installed and operating on residential rooftops in certain regions.

### Comprehensive Certificates

- IEC 61215, IEC 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-16BB                                                    |
| Weight                                | 21.5kg                                                       |
| Dimensions                            | 1722±2mm×1134±2mm×30±1mm                                     |
| Cable Cross Section Size              | 4mm <sup>2</sup> (IEC), 12 AWG(UL)                           |
| No. of cells                          | 108(6×18)                                                    |
| Junction Box                          | IP68, 3 diodes                                               |
| Connector                             | MC4-EVO2                                                     |
| Cable Length<br>(Including Connector) | Portrait:200mm(+)/300mm(-);<br>Landscape:1200mm(+)/1200mm(-) |
| Front Glass/Back Glass                | 1.6mm/1.6mm                                                  |
| Packaging Configuration               | 36pcs/Pallet,<br>936pcs/40HQ Container                       |

## ELECTRICAL PARAMETERS AT STC

| TYPE                                                            | JAM54D40<br>-410/GB                                             | JAM54D40<br>-415/GB | JAM54D40<br>-420/GB | JAM54D40<br>-425/GB | JAM54D40<br>-430/GB | JAM54D40<br>-435/GB |
|-----------------------------------------------------------------|-----------------------------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Rated Maximum Power(P <sub>max</sub> ) [W]                      | 410                                                             | 415                 | 420                 | 425                 | 430                 | 435                 |
| Open Circuit Voltage(V <sub>oc</sub> ) [V]                      | 37.71                                                           | 38.00               | 38.28               | 38.56               | 38.84               | 39.11               |
| Maximum Power Voltage(V <sub>mp</sub> ) [V]                     | 31.88                                                           | 32.13               | 32.38               | 32.64               | 32.88               | 33.13               |
| Short Circuit Current(I <sub>sc</sub> ) [A]                     | 13.55                                                           | 13.60               | 13.65               | 13.70               | 13.75               | 13.80               |
| Maximum Power Current(I <sub>mp</sub> ) [A]                     | 12.86                                                           | 12.92               | 12.97               | 13.02               | 13.08               | 13.13               |
| Module Efficiency [%]                                           | 21.0                                                            | 21.3                | 21.5                | 21.8                | 22.0                | 22.3                |
| Power Tolerance                                                 | 0~+5W                                                           |                     |                     |                     |                     |                     |
| Temperature Coefficient of I <sub>sc</sub> (α <sub>Isc</sub> )  | +0.046%/°C                                                      |                     |                     |                     |                     |                     |
| Temperature Coefficient of V <sub>oc</sub> (β <sub>Voc</sub> )  | -0.260%/°C                                                      |                     |                     |                     |                     |                     |
| Temperature Coefficient of P <sub>max</sub> (γ <sub>Pmp</sub> ) | -0.300%/°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 CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO

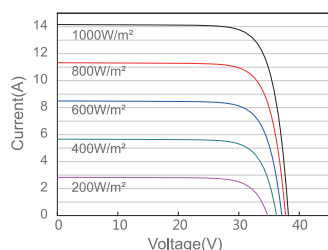
## OPERATING CONDITIONS

| TYPE                                        | JAM54D40<br>-410/GB | JAM54D40<br>-415/GB | JAM54D40<br>-420/GB | JAM54D40<br>-425/GB | JAM54D40<br>-430/GB | JAM54D40<br>-435/GB | Maximum System Voltage                                  | 1500V DC                                                          |
|---------------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------------------------------------------|-------------------------------------------------------------------|
| Rated Max Power(P <sub>max</sub> ) [W]      | 443                 | 448                 | 454                 | 459                 | 464                 | 470                 | Operating Temperature                                   | -40°C~+85°C                                                       |
| Open Circuit Voltage(V <sub>oc</sub> ) [V]  | 37.71               | 38.00               | 38.28               | 38.56               | 38.84               | 39.11               | Maximum Series Fuse Rating                              | 30A                                                               |
| Max Power Voltage(V <sub>mp</sub> ) [V]     | 31.88               | 32.13               | 32.38               | 32.64               | 32.88               | 33.13               | Maximum Static Load, Front<br>Maximum Static Load, Back | 5400Pa(112 lb/ft <sup>2</sup> )<br>2400Pa(50 lb/ft <sup>2</sup> ) |
| Short Circuit Current(I <sub>sc</sub> ) [A] | 14.63               | 14.69               | 14.74               | 14.80               | 14.85               | 14.90               | NOCT                                                    | 45±2°C                                                            |
| Max Power Current(I <sub>mp</sub> ) [A]     | 13.89               | 13.95               | 14.01               | 14.06               | 14.12               | 14.18               | Bifaciality*                                            | 80%±10%                                                           |
| Irradiation Ratio (rear/front)              | 10%                 |                     |                     |                     |                     |                     | Fire Performance                                        | UL Type 29                                                        |

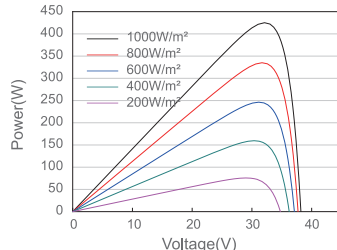
\*Bifaciality=P<sub>max, rear</sub>/Rated P<sub>max, front</sub>

## CHARACTERISTICS

Current-Voltage Curve JAM54D40-425/GB



Power-Voltage Curve JAM54D40-425/GB



Current-Voltage Curve JAM54D40-425/GB

