

## DEEP BLUE 3.0 Pro

Mono

420W MBB Half-cell Module

JAM54S31 395-420/GR Series

### Introduction

Assembled with 11BB PERC cells and gapless ribbon connection technology, the modules can offer higher output power with improved module efficiency, the reduction of cells gaps brings outstanding module appearance. The half-cell configurature makes less shading effect, lower risk of hot spot, as well as more reliable and stable power generation.



Higher output power



Lower LCOE



Less shading and lower resistive loss

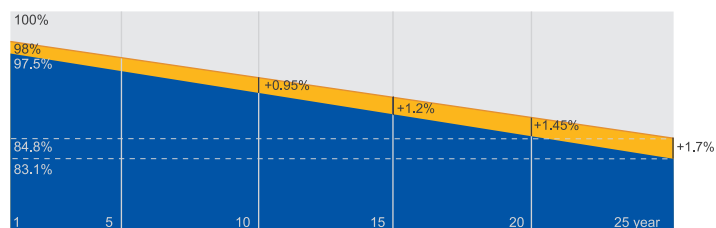


Better mechanical loading tolerance

### 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

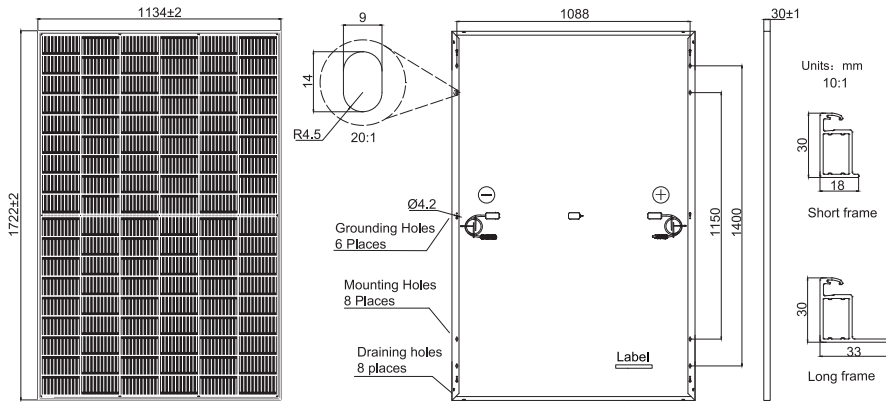
### Comprehensive Certificates

- 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**

**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	MC4-EVO2/ QC 4.10-35
Cable Length (Including Connector)	Portrait: 200mm(+)/300mm(-); Landscape: 1200mm(+)/1200mm(-)
Front Glass	2.8mm
Packaging Configuration	36pcs/Pallet 936pcs/40HQ Container

Remark: customized frame color and cable length available upon request

**ELECTRICAL PARAMETERS AT STC**

TYPE	JAM54S31 -395GR	JAM54S31 -400/GR	JAM54S31 -405/GR	JAM54S31 -410/GR	JAM54S31 -415/GR	JAM54S31 -420/GR
Rated Maximum Power(Pmax) [W]	395	400	405	410	415	420
Open Circuit Voltage(Voc) [V]	36.98	37.07	37.23	37.32	37.45	37.58
Maximum Power Voltage(Vmp) [V]	30.84	31.01	31.21	31.45	31.61	31.80
Short Circuit Current(Isc) [A]	13.70	13.79	13.87	13.95	14.02	14.10
Maximum Power Current(Imp) [A]	12.81	12.90	12.98	13.04	13.13	13.21
Module Efficiency [%]	20.2	20.5	20.7	21.0	21.3	21.5
Power Tolerance	0~+5W					
Temperature Coefficient of Isc(α <sub>Isc</sub> )	+0.045%/°C					
Temperature Coefficient of Voc(β <sub>Voc</sub> )	-0.275%/°C					
Temperature Coefficient of Pmax(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.

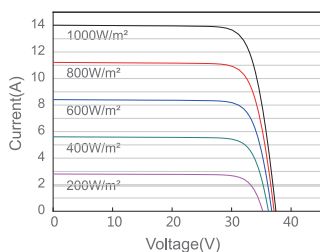
**ELECTRICAL PARAMETERS AT NOCT**

**OPERATING CONDITIONS**

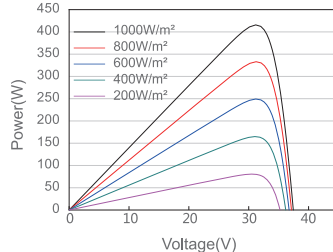
TYPE	JAM54S31 -395/GR	JAM54S31 -400/GR	JAM54S31 -405/GR	JAM54S31 -410/GR	JAM54S31 -415/GR	JAM54S31 -420/GR		
Rated Max Power(Pmax) [W]	298	302	306	310	314	318	Maximum System Voltage	1000V/1500V DC
Open Circuit Voltage(Voc) [V]	34.75	34.88	35.12	35.23	35.37	35.50	Operating Temperature	-40°C~+85°C
Max Power Voltage(Vmp) [V]	29.08	29.26	29.47	29.72	29.89	30.09	Maximum Series Fuse Rating	25A
Short Circuit Current(Isc) [A]	10.96	11.03	11.10	11.16	11.22	11.29	Maximum Static Load, Front Maximum Static Load, Back	5400Pa(112lb/ft <sup>2</sup> ) 2400Pa(50lb/ft <sup>2</sup> )
Max Power Current(Imp) [A]	10.25	10.32	10.38	10.43	10.50	10.57	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 JAM54S31-415/GR



Power-Voltage Curve JAM54S31-415/GR



Current-Voltage Curve JAM54S31-415/GR

