

# Harvest the Sunshine

## DEEP BLUE 3.0 Pro

Mono

### 420W MBB Half-cell Module

JAM54S31 395-420/GR/1500V 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

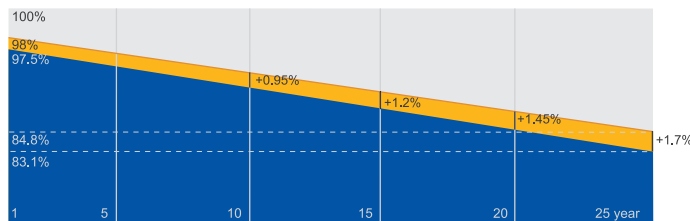


Better mechanical loading tolerance

#### 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
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- ISO 45001: 2018 Occupational health and safety management systems



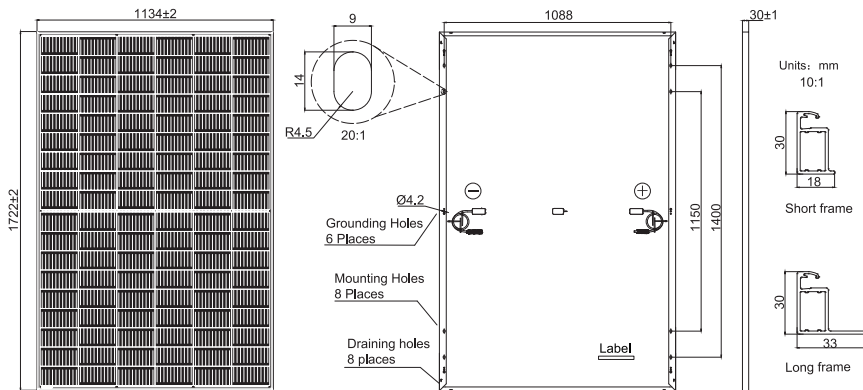
# JA SOLAR

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Shanghai JA Solar Technology Co., Ltd.



**MECHANICAL DIAGRAMS**



Remark: customized frame color and cable length available upon request

**SPECIFICATIONS**

Cell	Mono
Weight	19.5kg or 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(6x18)
Junction Box	IP68, 3 diodes
Connector	Stäubli MC4-EVO2A/MC4-EVO2 QC Solar QC 4.10-35
Cable Length (Including Connector)	Portrait: 200mm(+)/300mm(-); Landscape: 1200mm(+)/1200mm(-)
Front Glass	2.8mm or 3.2mm
Country of Manufacturer	China/Vietnam

**ELECTRICAL PARAMETERS AT STC**

TYPE	JAM54S31 -395/GR/1500V	JAM54S31 -400/GR/1500V	JAM54S31 -405/GR/1500V	JAM54S31 -410/GR/1500V	JAM54S31 -415/GR/1500V	JAM54S31 -420/GR/1500V
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. Measurement tolerance at STC: Pmax ±3%, Voc ±3% and Isc ±4%.

**ELECTRICAL PARAMETERS AT NOCT**

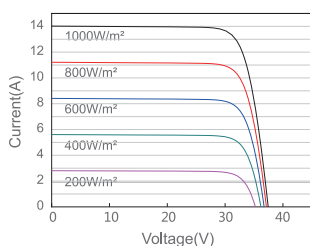
TYPE	JAM54S31-395 /GR/1500V	JAM54S31-400 /GR/1500V	JAM54S31-405 /GR/1500V	JAM54S31-410 /GR/1500V	JAM54S31-415 /GR/1500V	JAM54S31-420 /GR/1500V
Rated Max Power(Pmax) [W]	298	302	306	310	314	318
Open Circuit Voltage(Voc) [V]	34.75	34.88	35.12	35.23	35.37	35.50
Max Power Voltage(Vmp) [V]	29.08	29.26	29.47	29.72	29.89	30.09
Short Circuit Current(Isc) [A]	10.96	11.03	11.10	11.16	11.22	11.29
Max Power Current(Imp) [A]	10.25	10.32	10.38	10.43	10.50	10.57
NOCT	Irradiance 800W/m <sup>2</sup> , ambient temperature 20°C, wind speed 1m/s, AM1.5G					

**OPERATING CONDITIONS**

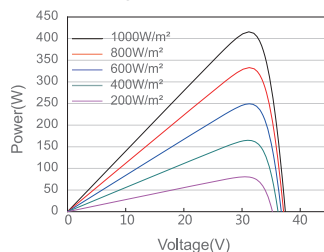
Maximum System Voltage	1500V DC
Operating Temperature	-40 °C ~ +85 °C
Maximum Series Fuse Rating	25A
Maximum Static Load, Front Maximum Static Load, Back	3600Pa, 1.5 1600Pa, 1.5
NOCT	45±2 C
Safety Class	Class II
Fire Safety Class	Class C

**CHARACTERISTICS**

Current-Voltage Curve JAM54S31-415/GR/1500V



Power-Voltage Curve JAM54S31-415/GR/1500V



Current-Voltage Curve JAM54S31-415/GR/1500V

