

## 420W MBB Half-Cell Module JAM72S10 400-420/MR Series

### Introduction

Assembled with multi-busbar 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



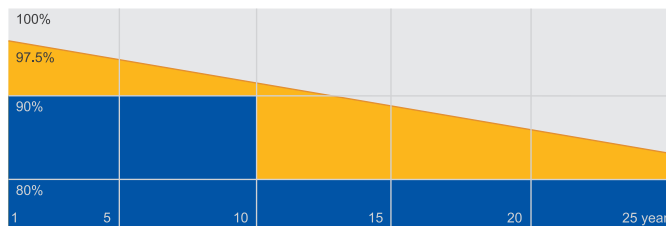
Less shading and lower resistive loss



Better mechanical loading tolerance

### Superior Warranty

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



■ JA Linear Power Warranty ■ Industry Warranty

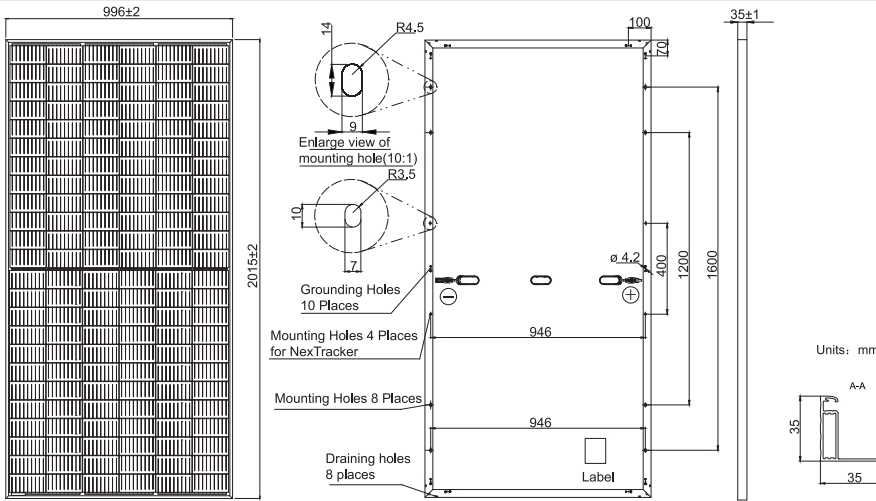
### Comprehensive Certificates

- IEC 61215, IEC 61730, UL61215, UL61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- ISO 45001: 2018 Occupational health and safety management systems
- IEC TS 62941: 2016 Terrestrial photovoltaic (PV) modules – Guidelines for increased confidence in PV module design qualification and type approval



**MECHANICAL DIAGRAMS**

**SPECIFICATIONS**



Remark: customized frame color and cable length available upon request

Cell	Mono
Weight	22.7kg±3%
Dimensions	2015±2mm×996±2mm×35±1mm
Cable Cross Section Size	4mm <sup>2</sup> (IEC), 12AWG(UL)
No. of cells	144 (6×24)
Junction Box	IP68, 3 diodes
Connector	MC4 (1000V) MC4-EVO2 (1500V)
Cable Length (Including Connector)	Portrait: 300mm(+)/400mm(-); Landscape: 1200mm(+)/1200mm(-)
Packaging Configuration	31pcs/pallet 682pcs/40ft Container

**ELECTRICAL PARAMETERS AT STC**

TYPE	JAM72S10 -400/MR	JAM72S10 -405/MR	JAM72S10 -410/MR	JAM72S10 -415/MR	JAM72S10 -420/MR
Rated Maximum Power(Pmax) [W]	400	405	410	415	420
Open Circuit Voltage(Voc) [V]	49.58	49.86	50.12	50.41	50.70
Maximum Power Voltage(Vmp) [V]	41.33	41.60	41.88	42.18	42.47
Short Circuit Current(Isc) [A]	10.33	10.39	10.45	10.51	10.56
Maximum Power Current(Imp) [A]	9.68	9.74	9.79	9.84	9.89
Module Efficiency [%]	19.9	20.2	20.4	20.7	20.9
Power Tolerance	0~+5W				
Temperature Coefficient of Isc(α <sub>Isc</sub> )	+0.044%/°C				
Temperature Coefficient of Voc(β <sub>Voc</sub> )	-0.272%/°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.  
\*For NexTracker installations static loading performance: front load measures 2400Pa, while back load measures 2400Pa.

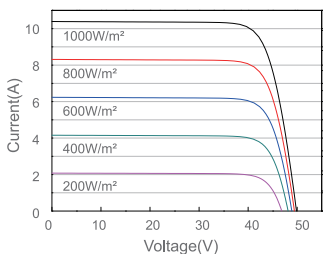
**ELECTRICAL PARAMETERS AT NOCT**

**OPERATING CONDITIONS**

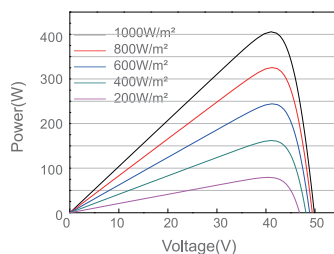
TYPE	JAM72S10 -400/MR	JAM72S10 -405/MR	JAM72S10 -410/MR	JAM72S10 -415/MR	JAM72S10 -420/MR	Operating Conditions
Rated Max Power(Pmax) [W]	302	306	310	314	318	Maximum System Voltage 1000V/1500V DC(IEC)
Open Circuit Voltage(Voc) [V]	46.41	46.66	46.91	47.16	47.38	Operating Temperature -40°C~+85°C
Max Power Voltage(Vmp) [V]	38.65	38.90	39.16	39.41	39.60	Maximum Series Fuse 20A
Short Circuit Current(Isc) [A]	8.25	8.31	8.36	8.41	8.46	Maximum Static Load, Front* 5400Pa(112 lb/ft <sup>2</sup> ) Maximum Static Load, Back* 2400Pa(50 lb/ft <sup>2</sup> )
Max Power Current(Imp) [A]	7.81	7.87	7.92	7.97	8.03	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 JAM72S10-405/MR



Power-Voltage Curve JAM72S10-405/MR



Current-Voltage Curve JAM72S10-405/MR

