

## 470 W MBB Half-Cell Module

JAM72S20 445-470/MR/1000V 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

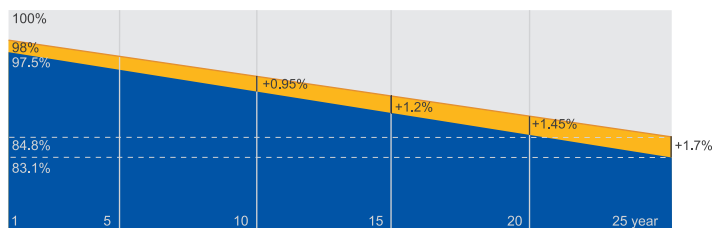


Better mechanical loading tolerance

### Superior Warranty

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

0.55% Annual Degradation Over 25 years



■ New linear power warranty ■ Standard module linear power warranty

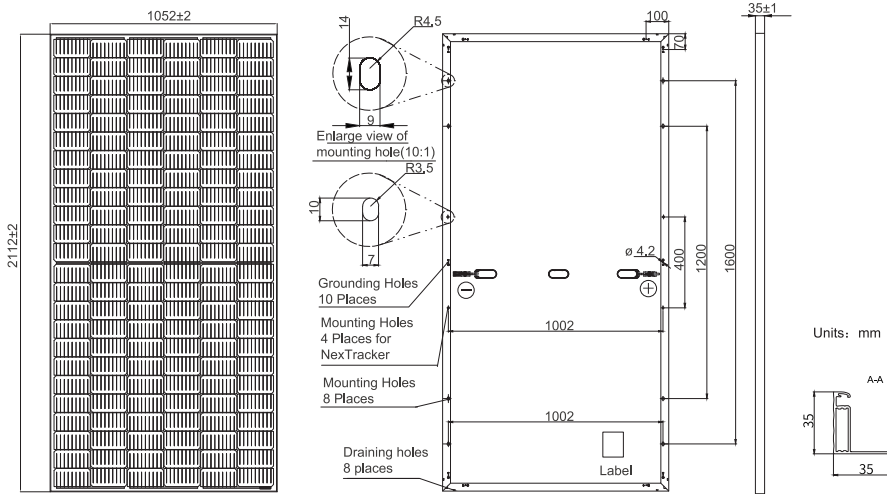
### Comprehensive Certificates

- 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



**MECHANICAL DIAGRAMS**

**SPECIFICATIONS**



Cell	Mono
Weight	24.7kg±3%
Dimensions	2112±2mm×1052±2mm×35±1mm
Cable Cross Section Size	4mm <sup>2</sup> (IEC)
No. of cells	144 (6×24)
Junction Box	IP68, 3 diodes
Connector	Genuine MC4 QC4.10
Cable Length (Including Connector)	Portrait: 300mm(+)/400mm(-); Landscape: 1200mm(+)/1200mm(-)
Country of Manufacturer	China/Vietnam

Remark: customized frame color and cable length available upon request

**ELECTRICAL PARAMETERS AT STC**

TYPE	JAM72S20 -445/MR/1000V	JAM72S20 -450/MR/1000V	JAM72S20 -455/MR/1000V	JAM72S20 -460/MR/1000V	JAM72S20 -465/MR/1000V	JAM72S20 -470/MR/1000V
Rated Maximum Power(Pmax) [W]	445	450	455	460	465	470
Open Circuit Voltage(Voc) [V]	49.56	49.70	49.85	50.01	50.15	50.31
Maximum Power Voltage(Vmp) [V]	41.21	41.52	41.82	42.13	42.43	42.69
Short Circuit Current(Isc) [A]	11.32	11.36	11.41	11.45	11.49	11.53
Maximum Power Current(Imp) [A]	10.80	10.84	10.88	10.92	10.96	11.01
Module Efficiency [%]	20.0	20.3	20.5	20.7	20.9	21.2
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.  
Measurement tolerance at STC: Pmax ±3%, Voc ±2% and Isc ±4%.

**ELECTRICAL PARAMETERS AT NOCT**

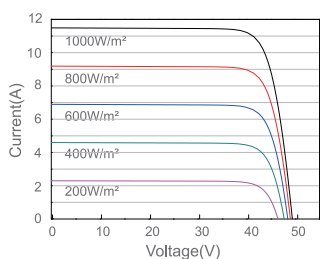
**OPERATING CONDITIONS**

TYPE	JAM72S20-445 /MR/1000V	JAM72S20-450 /MR/1000V	JAM72S20-455 /MR/1000V	JAM72S20-460 /MR/1000V	JAM72S20-465 /MR/1000V	JAM72S20-470 /MR/1000V	Operating Conditions
Rated Max Power(Pmax) [W]	336	340	344	348	352	355	Maximum System Voltage: 1000V DC(IEC)
Open Circuit Voltage(Voc) [V]	46.65	46.90	47.15	47.38	47.61	47.84	Operating Temperature: -40°C~+85°C
Max Power Voltage(Vmp) [V]	38.95	39.19	39.44	39.68	39.90	40.10	Maximum Series Fuse: 20A
Short Circuit Current(Isc) [A]	9.20	9.25	9.29	9.33	9.38	9.42	Maximum Static Load, Front*: 3600Pa, 1.5
Max Power Current(Imp) [A]	8.64	8.68	8.72	8.76	8.81	8.86	Maximum Static Load, Back*: 1600Pa, 1.5
NOCT	Irradiance 800W/m <sup>2</sup> , ambient temperature 20°C, wind speed 1m/s, AM1.5G						NOCT: 45±2°C
							Safety Class: Class II

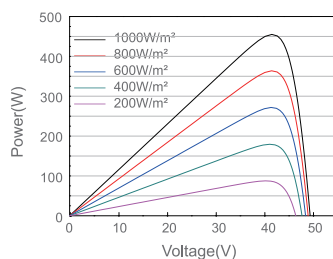
\*For NexTracker installations, Maximum Static Load, Front is 1800Pa while Maximum Static Load, Back is 1800Pa.

**CHARACTERISTICS**

Current-Voltage Curve JAM72S20-455/MR/1000V



Power-Voltage Curve JAM72S20-455/MR/1000V



Current-Voltage Curve JAM72S20-455/MR/1000V

