

## 465W MBB Half-Cell Module

JAM72S20 440-465/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



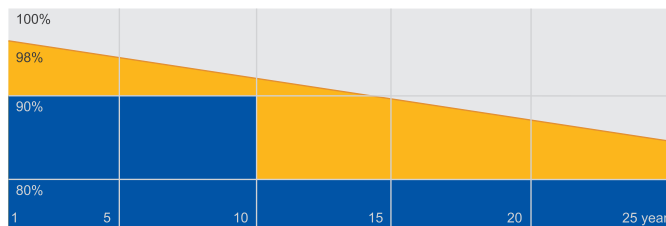
Less shading and lower resistive loss



Better mechanical loading tolerance

### Superior Warranty

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



■ JA Linear Power Warranty ■ Industry Warranty

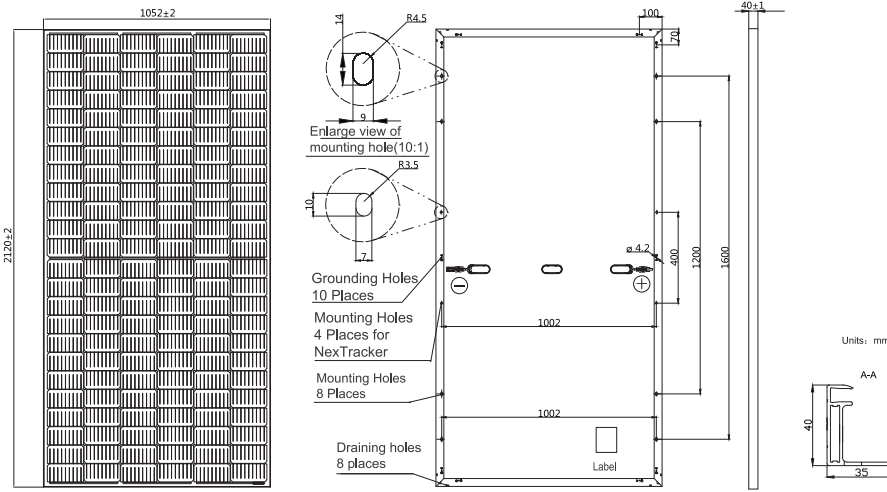
### Comprehensive Certificates

- IEC 61215, IEC 61730, UL 61215, UL 61730
- ISO 9001: 2015 Quality management systems
- ISO 14001: 2015 Environmental management systems
- OHSAS 18001: 2007 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	25.0kg±3%
Dimensions	2120±2mm×1052±2mm×40±1mm
Cable Cross Section Size	4mm <sup>2</sup> (IEC) , 12 AWG(UL)
No. of cells	144 (6×24)
Junction Box	IP68, 3 diodes
Connector	QC 4.10(1000V) QC 4.10-35(1500V)
Cable Length (Including Connector)	Portrait: 300mm(+)/400mm(-); Landscape: 1200mm(+)/1200mm(-)
Packaging Configuration	27pcs/pallet 594pcs/40ft Container

**ELECTRICAL PARAMETERS AT STC**

TYPE	JAM72S20 -440/MR	JAM72S20 -445/MR	JAM72S20 -450/MR	JAM72S20 -455/MR	JAM72S20 -460/MR	JAM72S20 -465/MR
Rated Maximum Power(Pmax) [W]	440	445	450	455	460	465
Open Circuit Voltage(Voc) [V]	49.40	49.56	49.70	49.85	50.01	50.15
Maximum Power Voltage(Vmp) [V]	40.90	41.21	41.52	41.82	42.13	42.43
Short Circuit Current(Isc) [A]	11.28	11.32	11.36	11.41	11.45	11.49
Maximum Power Current(Imp) [A]	10.76	10.80	10.84	10.88	10.92	10.96
Module Efficiency [%]	19.7	20.0	20.2	20.4	20.6	20.8
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.

**ELECTRICAL PARAMETERS AT NOCT**

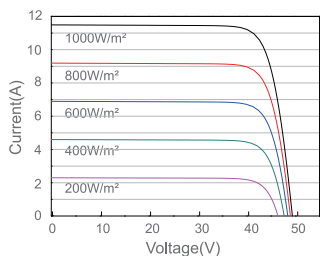
**OPERATING CONDITIONS**

TYPE	JAM72S20 -440/MR	JAM72S20 -445/MR	JAM72S20 -450/MR	JAM72S20 -455/MR	JAM72S20 -460/MR	JAM72S20 -465/MR		
Rated Max Power(Pmax) [W]	333	336	340	344	348	352	Maximum System Voltage	1000V/1500V DC
Open Circuit Voltage(Voc) [V]	46.40	46.65	46.90	47.15	47.38	47.61	Operating Temperature	-40 C ~+85 C
Max Power Voltage(Vmp) [V]	38.70	38.95	39.19	39.44	39.68	39.90	Maximum Series Fuse	20A
Short Circuit Current(Isc) [A]	9.16	9.20	9.25	9.29	9.33	9.38	Maximum Static Load,Front* Maximum Static Load,Back*	5400Pa(112 lb/ft <sup>2</sup> ) 2400Pa(50 lb/ft <sup>2</sup> )
Max Power Current(Imp) [A]	8.60	8.64	8.68	8.72	8.76	8.81	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

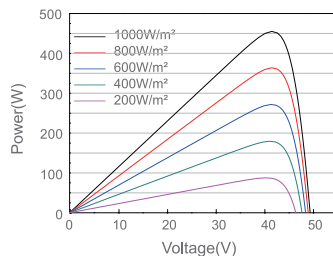
\*For NexTracker installations ,Maximum Static Load, Front is 1800Pa while Maximum Static Load, Back is 1800Pa.

**CHARACTERISTICS**

Current-Voltage Curve JAM72S20-455/MR



Power-Voltage Curve JAM72S20-455/MR



Current-Voltage Curve JAM72S20-455/MR

