

DEEP BLUE 4.0 Pro

Mono

455W n-type Bifacial Double Glass
High Efficiency Mono Module
JAM54D40 430-455/LB/1500V Series

Introduction

Powered by the latest SMBB n-type solar cell and half-cell configuration, these modules have higher output power, lower LID, better weak illumination response, and better temperature coefficient.



Higher power generation
better LCOE



Better weak illumination response



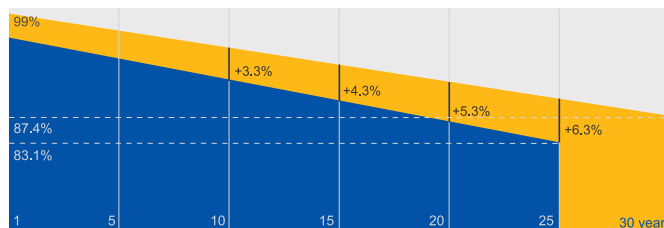
Better Temperature Coefficient

Superior Warranty

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

1% 1st-year Degradation

0.4% Annual Degradation
Over 30 years



■ n-type Bifacial Double Glass Module Linear Performance Warranty

■ Standard Module Linear Performance Warranty

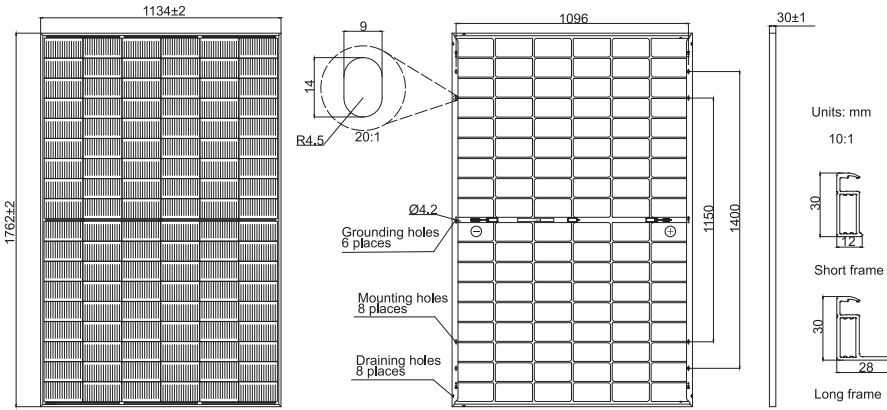
Comprehensive Certificates

- 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-16BB
Weight	22kg
Dimensions	1762±2mm×1134±2mm×30±1mm
Cable Cross Section Size	4mm ² (IEC), 12 AWG(UL)
No. of cells	108(6×18)
Junction Box	IP68, 3 diodes
Connector	Stäubli MC4-EVO2A/MC4-EVO2 QC Solar QC 4.10-351/QC 4.10-35
Cable Length (Including Connector)	Portrait: 300mm(+)/400mm(-); 800mm(+)/800mm(-)(Leapfrog) Landscape: 1400mm(+)/1400mm(-)
Front Glass/Back Glass	1.6mm/1.6mm
Country of Manufacturer	China/Vietnam

Remark: customized frame color and cable length available upon request

ELECTRICAL PARAMETERS AT STC

TYPE	JAM54D40-430/LB/1500V	JAM54D40-435/LB/1500V	JAM54D40-440/LB/1500V	JAM54D40-445/LB/1500V	JAM54D40-450/LB/1500V	JAM54D40-455/LB/1500V
Rated Maximum Power(Pmax) [W]	430	435	440	445	450	455
Open Circuit Voltage(Voc) [V]	38.50	38.70	38.90	39.10	39.30	39.50
Maximum Power Voltage(Vmp) [V]	32.12	32.29	32.47	32.65	32.82	33.00
Short Circuit Current(Isc) [A]	14.14	14.23	14.31	14.40	14.48	14.56
Maximum Power Current(Imp) [A]	13.39	13.47	13.55	13.63	13.71	13.79
Module Efficiency [%]	21.5	21.8	22.0	22.3	22.5	22.8
Power Tolerance	0~+5W					
Temperature Coefficient of Isc(α _{Isc})	+0.046%/°C					
Temperature Coefficient of Voc(β _{Voc})	-0.260%/°C					
Temperature Coefficient of Pmax(γ _{Pmp})	-0.300%/°C					
STC	Irradiance 1000W/m ² , 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 CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO

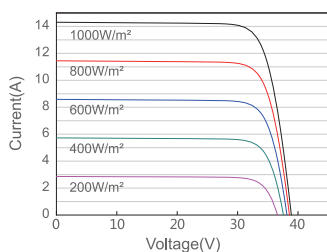
OPERATING CONDITIONS

TYPE	JAM54D40-430/LB/1500V	JAM54D40-435/LB/1500V	JAM54D40-440/LB/1500V	JAM54D40-445/LB/1500V	JAM54D40-450/LB/1500V	JAM54D40-455/LB/1500V	Maximum System Voltage	1500V DC
Rated Max Power(Pmax) [W]	464	470	475	481	486	491	Operating Temperature	-40°C~+85°C
Open Circuit Voltage(Voc) [V]	38.50	38.70	38.90	39.10	39.30	39.50	Maximum Series Fuse Rating	30A
Max Power Voltage(Vmp) [V]	32.11	32.29	32.47	32.65	32.82	32.99	Maximum Static Load, Front Maximum Static Load, Back	2400Pa, 1.5 1600Pa, 1.5
Short Circuit Current(Isc) [A]	15.27	15.36	15.46	15.55	15.64	15.73	NOCT	45±2°C
Max Power Current(Imp) [A]	14.46	14.55	14.63	14.72	14.81	14.89	Bifaciality*	80%±10%
Irradiation Ratio (rear/front)	10%						Fire Safety Class	Class C

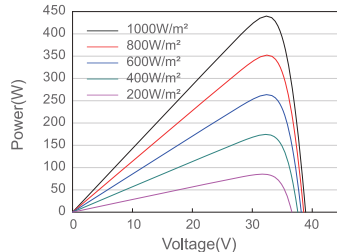
*Bifaciality=Pmax,rear/Rated Pmax,front

CHARACTERISTICS

Current-Voltage Curve JAM54D40-440/LB/1500V



Power-Voltage Curve JAM54D40-440/LB/1500V



Current-Voltage Curve JAM54D40-440/LB/1500V

