

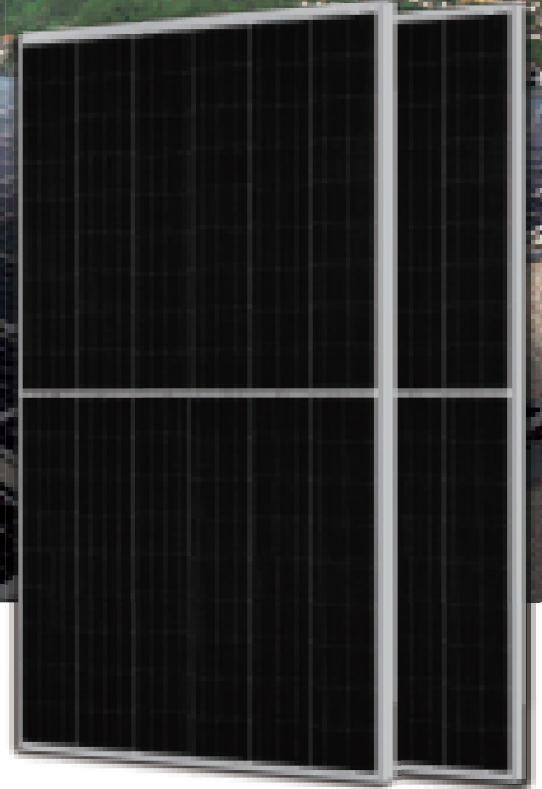
## DEEP BLUE 4.0

**Mono**

440W n-type Bifacial Double Glass  
High Efficiency Mono Module  
JAM54D40 415-440/GB/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

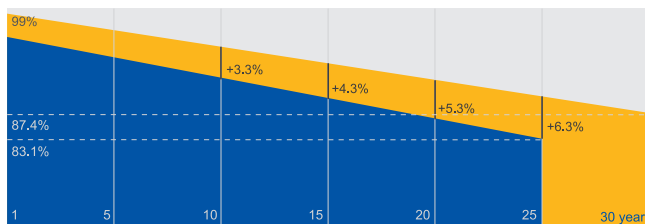


Better Temperature Coefficient

### 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

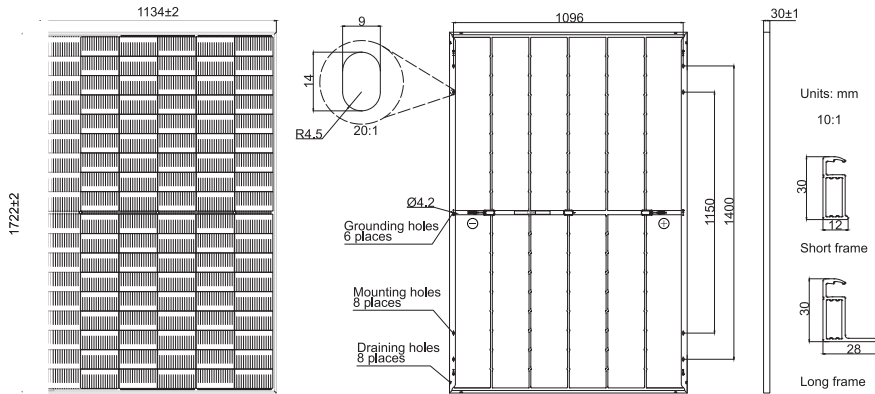
### Comprehensive Certificates

- 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	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(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:200mm(+)/300mm(-); Landscape:1100mm(+)/1100mm(-)
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 -415/GB/1500V	JAM54D40 -420/GB/1500V	JAM54D40 -425/GB/1500V	JAM54D40 -430/GB/1500V	JAM54D40 -435/GB/1500V	JAM54D40 -440/GB/1500V
Rated Maximum Power(Pmax) [W]	415	420	425	430	435	440
Open Circuit Voltage(Voc) [V]	37.92	38.05	38.20	38.32	38.45	38.60
Maximum Power Voltage(Vmp) [V]	31.59	31.80	32.01	32.21	32.42	32.65
Short Circuit Current(Isc) [A]	14.02	14.09	14.16	14.23	14.30	14.36
Maximum Power Current(Imp) [A]	13.14	13.21	13.28	13.35	13.42	13.48
Module Efficiency [%]	21.3	21.5	21.8	22.0	22.3	22.5
Power Tolerance	0~+5W					
Temperature Coefficient of Isc(α <sub>Isc</sub> )	+0.046%/°C					
Temperature Coefficient of Voc(β <sub>Voc</sub> )	-0.260%/°C					
Temperature Coefficient of Pmax(γ <sub>Pmp</sub> )	-0.300%/°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%.

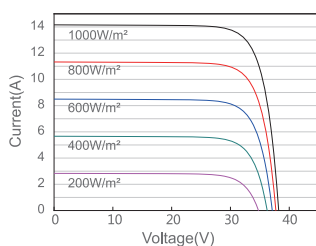
**ELECTRICAL CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO**

**OPERATING CONDITIONS**

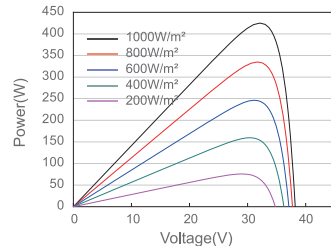
TYPE	JAM54D40 -415/GB/1500V	JAM54D40 -420/GB/1500V	JAM54D40 -425/GB/1500V	JAM54D40 -430/GB/1500V	JAM54D40 -435/GB/1500V	JAM54D40 -440/GB/1500V		
Rated Max Power(Pmax) [W]	448	454	459	464	470	475	Maximum System Voltage	1500V DC
Open Circuit Voltage(Voc) [V]	37.95	38.08	38.23	38.35	38.48	38.63	Operating Temperature	-40°C~+85°C
Max Power Voltage(Vmp) [V]	31.58	31.79	32.00	32.21	32.41	32.64	Maximum Series Fuse Rating	30A
Short Circuit Current(Isc) [A]	15.14	15.22	15.29	15.37	15.44	15.51	Maximum Static Load,Front Maximum Static Load,Back	2400Pa, 1.5 1600Pa, 1.5
Max Power Current(Imp) [A]	14.19	14.27	14.34	14.42	14.49	14.56	NOCT	45±2°C
Irradiation Ratio (rear/front)	10%						Bifaciality*	80%±10%
*Bifaciality=Pmax,rear/Rated Pmax,front							Fire Safety Class	Class C

**CHARACTERISTICS**

Current-Voltage Curve JAM54D40-425/GB/1500V



Power-Voltage Curve JAM54D40-425/GB/1500V



Current-Voltage Curve JAM54D40-425/GB/1500V

