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# **EnergyPal**

# Solar Panel Guide Specification Data Sheet

# VSUN SOLAR VSUN325-120M-BB VSUN320-120M-BB

Also available on the web at EnergyPal.com/vsun-solar-solar-panels/vsun320-120m-bb



# VSUN325-120M-BB The Half Cell Module

VSUN325-120M-BB VSUN315-120M-BB

# VSUN320-120M-BB VSUN310-120M-BB

19.54% Module efficiency

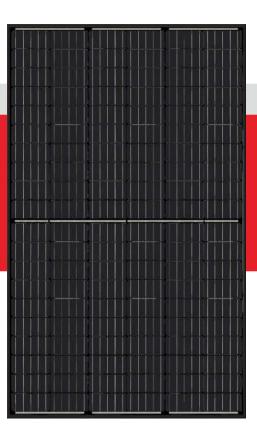
325W Highest power output

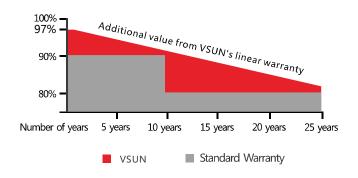
PERC	PERC Cell Technology
	Higher output power
	Lower risk of micro-crack
	Positive tolerance offer
	Lower risk of hot spot
	Better shading tolerance
$\bigcirc$	Certified for salt/ammonia corrosion resistance
$\bigcirc$	Load certificates: wind to 2400Pa and snow to 5400Pa

Lower LCOE

12years Material & Workmanship warranty

25years Linear power output warranty







12-year product warranty25-year linear power output warranty

Invested by Fuji Solar, VSUN is a Japanese solar module solutions provider located in Tokyo that offers Japanese quality solar technologies globally. The group's business covers Japan, North America, Southeast Asia and EMEA since 2006.Solar module manufacturing base is located in Vietnam, Bac Giang province, and it is one of the fastest-growing, most heavily invested and most promising solar high-tech enterprises in the country.

Innovative & Smart – VSUN has been committed to providing greener, cleaner, and more intelligent renewable energy solutions. It is focusing on the new energy market and the development of customized and high-efficiency products.

VSUN offers PV project development and investments and provides full package of service for EPC solutions.

Note:

<u>IEC</u>

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A Sub-company of **FUJISELAR** 







Engineered in Japan vsun@vietnamsunergy.com WWW.VSUN-SOlar.COM

### **Electrical Characteristics at Standard Test Conditions(STC)**

Module Type	VSUN325-120M-BB	VSUN320-120M-BB	VSUN315-120M-BB	VSUN310-120M-BB
Maximum Power - Pmax (W)	325	320	315	310
Open Circuit Voltage - Voc (V)	40.4	40.2	39.9	39.6
Short Circuit Current - Isc (A)	10.28	10.17	10.08	9.98
Maximum Power Voltage - Vmpp (V)	33.5	33.3	33.1	32.8
Maximum Power Current - Impp (A)	9.71	9.61	9.52	9.46
Module Efficiency	19.54%	19.24%	18.94%	18.64%
Chan doub Toot Con ditions (CTC), impedience 1,000 M//as2	ANA 4 5 1 1 1		0 . 20/	

Standard Test Conditions (STC): irradiance 1,000 W/m<sup>2</sup>; AM 1,5; module temperature 25°C. Tolerance of Pmpp: 0~+3%. Measuring uncertainty of power: ±3%.

### **Electrical Characteristics at Normal Operating Cell Temperature(NOCT)**

Module Type	VSUN325-120M-BB	VSUN320-120M-BB	VSUN315-120M-BB	VSUN310-120M-BB
Maximum Power - Pmax (W)	240.2	236.3	234.7	228.4
Open Circuit Voltage - Voc (V)	37.4	37.2	36.9	36.6
Short Circuit Current - Isc (A)	8.3	8.22	8.15	8.07
Maximum Power Voltage - Vmpp (V)	30.8	30.6	30.6	30.2
Maximum Power Current - Impp (A)	7.8	7.72	7.67	7.5

Normal Operating Cell Temperature ((NOCT) : irradiance 800W/m<sup>2</sup>; wind speed 1 m/s ; cell temperature 45°C; ambient temperature 20°C. Measuring uncertainty of power: ±3%.

### **Temperature Characteristics**

### **Maximum Ratings**

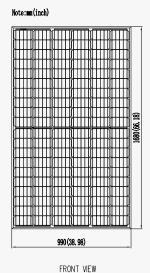
NOCT	45℃(±2℃)	Maximum System Voltage [V]	1000
Voltage Temperature Coefficient	-0.29%/K	Series Fuse Rating [A]	20
Current Temperature Coefficient	+0.05%/K		
Power Temperature Coefficient	-0.39%/K		
Power remperature coefficient	-0.3378/K		

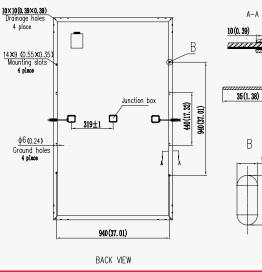
### **Material Characteristics**

Dimensions	1680×990×35mm (L×W×H)		
Weight	18.7kg		
Frame	Black anodized aluminum profile		
Front Glass	White toughened safety glass, 3.2 mm		
Cell Encapsulation	EVA (Ethylene-Vinyl-Acetate)		
Back Sheet	Composite film		
Cells	12×10 pieces monocrystalline solar cells series strings (156.75mm×78.375mm)		
Junction Box	Rated current≥13A, IP≥67, TUV&UL		
Cable&Connector	Length 400 mm, 1×4 mm <sup>2</sup> , compatible with MC4		
Packaging	System Design		

### -40 °C to + 85 °C Dimensions(L×W×H) 1720×1110×1120mm Temperature Range Maximum diameter of 25 mm with impact Container20' 360 Withstanding Hail Container40' 780 speed of 23 m·s-1 5,400 Pa Container40'HC 845 Maximum Surface Load class A Application class

## **Dimensions**



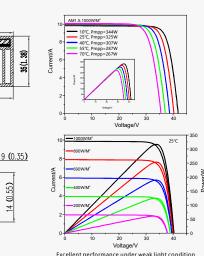


## **IV-Curves**

A-A

В

14 (0.55)



Excellent performance under weak light condition.

Engineered in Japan vsun@vietnamsunergy.com www.vsun-solar.com