



# 12

YEAR

QUALITY ASSURANCE

# 30

YEAR

POWER OUTPUT GUARANTEE

## VSUN475N-120BMH-BB

VSUN475N-120BMH-BB      VSUN470N-120BMH-BB  
 VSUN465N-120BMH-BB      VSUN460N-120BMH-BB

**475W**  
 Highest power output

**21.95%**  
 Module efficiency

**1.0%**  
 First-year degradation warranty

**0.4%**  
 Annual degradation over 30 years

### KEY FEATURES

**TOPcon** TOPcon technology

- Higher output power
- MBB technology with Circular Ribbon
- Positive tolerance offer
- Bifacial cells, converting more sunlight into electricity
- Better shading tolerance
- Better temperature coefficient
- Lower LCOE
- UL 61730 & CSA 61730  
IEC 61215 & IEC 61730

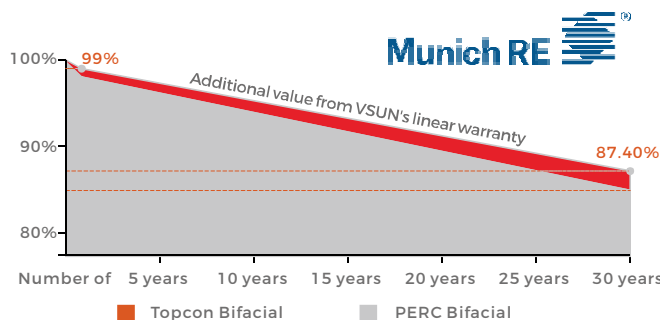
### ABOUT VSUN

Invested by Fuji Solar, VSUN SOLAR is a solar solution provider with headquartered in Tokyo, Japan that offers reliability, high efficiency solar products and technology globally. VSUN is rated as BNEF Tier 1 PV module manufacturer, PVEL Lab "Best performer" and EcoVadis "Bronze Award".

### PRODUCT CERTIFICATION



### WARRANTY



## Electrical Characteristics at Standard Test Conditions(STC)

Module Type	VSUN475N-120BMH-BB	VSUN470N-120BMH-BB	VSUN465N-120BMH-BB	VSUN460N-120BMH-BB
Maximum Power - Pmax (W)	475	470	465	460
Open Circuit Voltage - Voc (V)	42.53	42.37	42.21	42.07
Short Circuit Current - Isc (A)	14.23	14.15	14.08	13.99
Maximum Power Voltage - Vmpp (V)	35.23	35.07	34.92	34.76
Maximum Power Current - Imp (A)	13.49	13.41	13.32	13.24
Module Efficiency	21.95%	21.72%	21.49%	21.26%

Standard Test Conditions (STC): irradiance 1,000 W/m<sup>2</sup>; AM 1.5; module temperature 25°C. Pmax Sorting : 0~5W. Measuring Tolerance: ±3%.

Remark: Electrical data 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 Characteristics with different rear side power gain(reference to 470 front)

Pmax (W)	Voc (V)	Isc (A)	Vmpp (V)	Imp (A)	Pmax gain
494	42.37	14.86	35.07	14.08	5%
517	42.37	15.57	35.07	14.75	10%
563	42.45	16.98	34.99	16.09	20%
587	42.45	17.69	34.99	16.76	25%

## Material Characteristics

Dimensions	1908×1134×30mm (L×W×H) 75.12×44.65×1.18 inches (L×W×H)
Weight	23.9kg / 52.69lbs
Frame	Black anodized aluminum profile
Front Glass	AR-Coating toughened glass, 3.2 mm
Back Glass	Transparent black-mesh backsheet
Cells	12×10 pcs mono solar cells series strings
Junction Box	IP68, 3 diodes
Cable	Potrait: 500 mm (cable length can be customized), 1×4 mm <sup>2</sup> or 12AWG, Connector: PV-ZH202B(Manufacturer by Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.)

## System Design

Maximum System Voltage [V]	1500
Series Fuse Rating [A]	30
Bifaciality	80%±10%
Fire Rating	Class C for IEC and TYPE 1 for US
Protection Class	Class II
Temperature Range	-40 °C to + 85 °C
Maximum Surface Load	+5400/-2400 Pa +113/-50 psf
Application class	class A
Withstanding Hail	Maximum diameter of 25 mm with impact speed of 23 m/s

## Packaging

Dimensions(L×W×H)	1940×1125×1253mm / 76.38×44.29×49.33inches
Quantity per pallet	36 pcs
Container 20'	180
Container 40'	432
Container 40'HC	864 or 792 for US

## Temperature Characteristics

NOCT	45°C(±2°C)
Voltage Temperature Coefficient	-0.26%/°C
Current Temperature Coefficient	+0.046%/°C
Power Temperature Coefficient	-0.30%/°C

## Dimensions

## IV-Curves

