

12
YEAR
QUALITY ASSURANCE

30
YEAR
POWER OUTPUT GUARANTEE

VSUN460N-96BMHR-DG-BB

VSUN460N-96BMHR-DG-BB

VSUN455N-96BMHR-DG-BB

VSUN450N-96BMHR-DG-BB

VSUN445N-96BMHR-DG-BB

VSUN440N-96BMHR-DG-BB

VSUN435N-96BMHR-DG-BB

460W

Highest power output

23.02%

Module efficiency

1.0%

First-year degradation warranty

0.40%

Annual degradation over 30 years

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".

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



Excellent PID Resistance



Lower LCOE

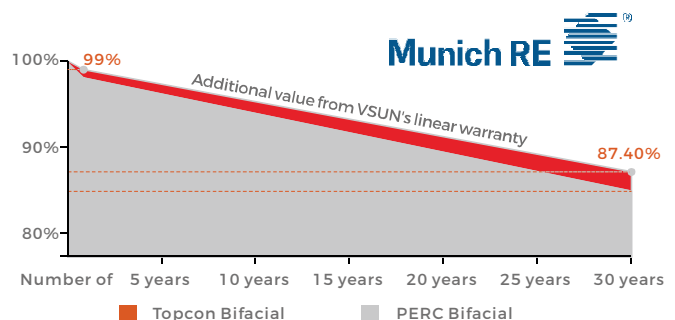


UL 61730 & CSA 61730
IEC 61215 & IEC 61730

PRODUCT CERTIFICATION



WARRANTY



Electrical Characteristics at Standard Test Conditions(STC)

Module Type	VSUN460N-96BMHR-DG-BB	VSUN455N-96BMHR-DG-BB	VSUN450N-96BMHR-DG-BB	VSUN445N-96BMHR-DG-BB	VSUN440N-96BMHR-DG-BB	VSUN435N-96BMHR-DG-BB
Maximum Power - Pmax (W)	460	455	450	445	440	435
Open Circuit Voltage - Voc (V)	35.49	35.31	35.13	34.95	34.77	34.59
Short Circuit Current - Isc (A)	16.15	16.1	16.05	16	15.95	15.9
Maximum Power Voltage - Vmpp (V)	30.44	30.26	30.07	29.9	29.72	29.54
Maximum Power Current - Impp (A)	15.12	15.04	14.97	14.89	14.81	14.73
Module Efficiency	23.02%	22.77%	22.52%	22.27%	22.02%	21.77%

Standard Test Conditions (STC): irradiance 1,000 W/m²; 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 455 front)

Pmax (W)	Voc (V)	Isc (A)	Vmpp (V)	Impp (A)	Pmax gain
478	35.31	16.91	30.26	15.79	5%
501	35.31	17.71	30.26	16.54	10%
545	35.36	19.32	30.21	18.05	20%
568	35.36	20.13	30.21	18.80	25%

Material Characteristics

Dimensions	1762×1134×30mm (L×W×H) 69.37×44.65×1.18 inches (L×W×H)
Weight	25.0kg / 55.12lbs
Frame	Black anodized aluminum profile
Front Glass	AR-coating Semi-toughened glass, 2.0mm
Back Glass	Black Glazed & Semi-toughened glass, 2.0mm
Cells	12×8 pcs mono solar cells series strings
Junction Box	IP68, 3 diodes
Cable	Potrait: 1300 mm (cable length can be customized) , 1×4 mm ² or 12AWG

System Design

Maximum System Voltage [V]	1500
Series Fuse Rating [A]	30
Bifaciality	80%±10%
Fire Rating	Class C for IEC and TYPE 29 for US
Protection Class	Class II
Temperature Range	-40 °C to + 85 °C +5400/-2400 Pa +113/-50 psf
Maximum Surface Load	
Application class	class A
Withstanding Hail	Maximum diameter of 25 mm with impact speed of 23 m/s

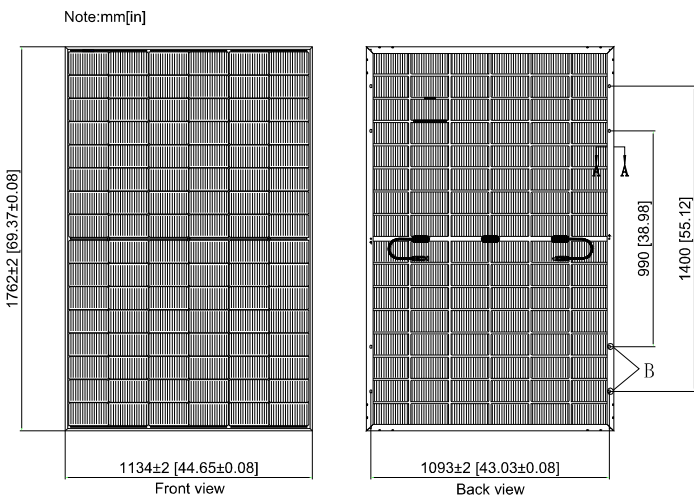
Packaging

Dimensions(L×W×H)	1800×1125×1253mm / 70.87×44.29×49.33inches
Quantity per pallet	35 pcs
Container 20'	210
Container 40'	455
Container 40'HC	910 or 735 for US

Temperature Characteristics

NOCT	45°C(±2°C)
Voltage Temperature Coefficient	-0.25%/°C
Current Temperature Coefficient	+0.046%/°C
Power Temperature Coefficient	-0.30%/°C

Dimensions



IV-Curves

