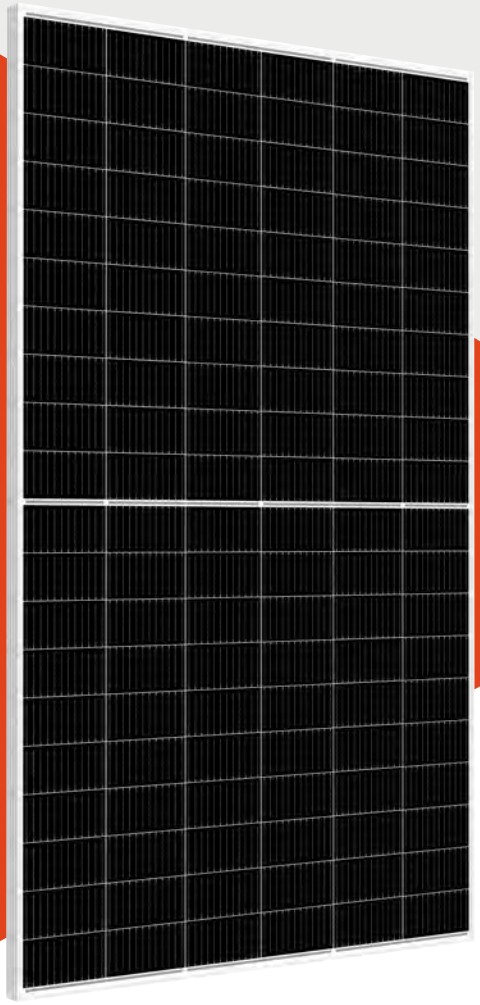
MADE IN VIETNAM, manufacture by VIETNAM SUNERGY JOINT STOCK COMPANY

VSUN
Innovative & Smart



12 YEAR
QUALITY ASSURANCE

30 YEAR
POWER OUTPUT GUARANTEE

VSUN670-132BMH-DG

VSUN670-132BMH-DG
VSUN665-132BMH-DG
VSUN660-132BMH-DG
VSUN655-132BMH-DG

670W
Highest power output

21.57%
Module efficiency

2.0%
First-year degradation warranty

0.45%
Annual degradation over 30 years

KEY FEATURES

- PERC — MBB technology with Circular Ribbon
- Higher output power
- Half-cell Technology
- 0~3% — Positive tolerance offer
- Bifacial cells, converting more sunlight into electricity
- Better shading tolerance
- Load certificates: wind to 2400Pa and snow to 5400Pa
- Lower LCOE

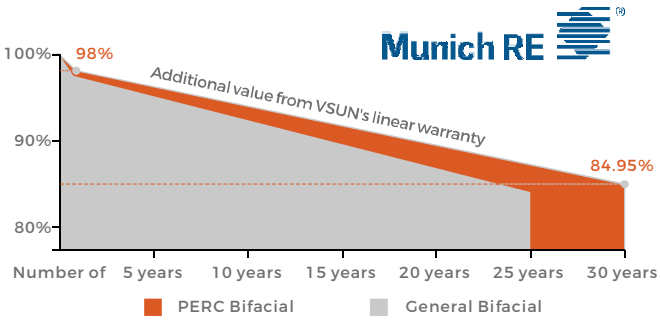
ABOUT VSUN

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

TÜV SÜD · CSA C US · CE · PV CYCLE · ISO · IEC

WARRANTY



Update Time:2023.5.13

MADE IN VIETNAM, manufacture by VIETNAM SUNERGY JOINT STOCK COMPANY

Electrical Characteristics at Standard Test Conditions(STC)

Module Type	VSUN670-132BMH-DG	VSUN665-132BMH-DG	VSUN660-132BMH-DG	VSUN655-132BMH-DG
Maximum Power - Pmax (W)	670	665	660	655
Open Circuit Voltage - Voc (V)	45.61	45.46	45.32	45.15
Short Circuit Current - Isc (A)	18.8	18.73	18.65	18.59
Maximum Power Voltage - Vmpp (V)	37.94	37.79	37.65	37.48
Maximum Power Current - Impp (A)	17.66	17.6	17.53	17.48
Module Efficiency	21.57%	21.41%	21.25%	21.09%

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 665 front)

Pmax (W)	Voc (V)	Isc (A)	Vmpp (V)	Impp (A)	Pmax gain
698	45.46	19.67	37.79	18.48	5%
732	45.46	20.60	37.79	19.36	10%
798	45.51	22.48	37.73	21.12	20%
831	45.51	23.41	37.73	22.00	25%

Material Characteristics

Dimensions	2384×1303×35mm (L×W×H)
Weight	38.5kg
Frame	Silver anodized aluminum profile
Front Glass	AR-coating Semi-toughened glass, 2.0mm
Cell Encapsulation	EVA (Ethylene-Vinyl-Acetate) or POE
Back Glass	Glazed & Semi-toughened glass, 2.0mm
Cells	12×11 pieces mono solar cells series strings
Junction Box	IP68, 3 diodes
Cable&Connector	Potrait: 500 mm (cable length can be customized), 1×4 mm2 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	70%±10%
Fire Rating	Class C for IEC and TYPE 29 for US
PV module classification	Class II
Temperature Range	-40 °C to + 85 °C
Maximum Surface Load	5,400 Pa
Application class	Class A
Withstanding Hail	Maximum diameter of 25 mm with impact speed of 23 m/s

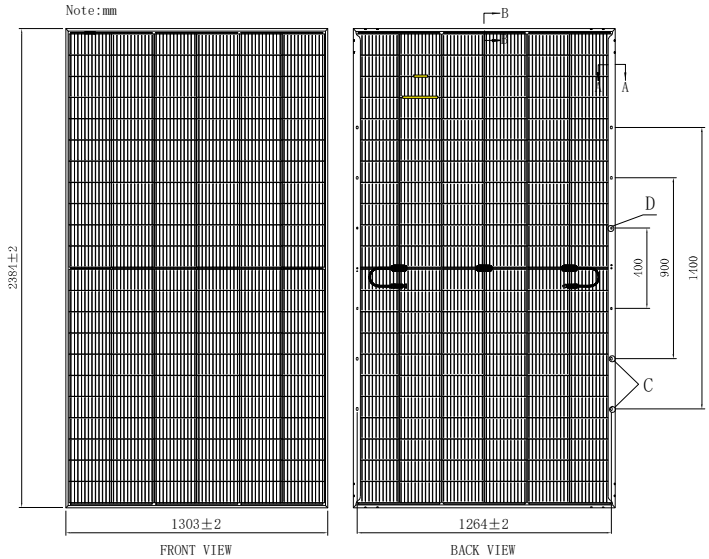
Packaging

Dimensions(L×W×H)	1325×1125×2510mm
Container 20'	/
Container 40'	/
Container 40'HC	540

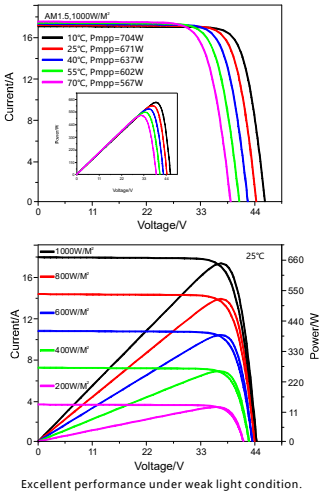
Temperature Characteristics

NOCT	45°C(±2°C)
Voltage Temperature Coefficient	-0.25%/°C
Current Temperature Coefficient	+0.04%/°C
Power Temperature Coefficient	-0.34%/°C

Dimensions



IV-Curves



Excellent performance under weak light condition.

Update Time:2023.5.13