

VSUN455N-108BMH-DG

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VSUN450N-108BMH-DG

VSUN445N-108BMH-DG

VSUN440N-108BMH-DG

455W

Highest power output

23.30%

Module efficiency

1.0%

First-year degradation warranty

0.40%

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



Excellent PID Resistance



Lower LCOE



UL 61730 & CSA 61730
IEC 61215 & IEC 61730

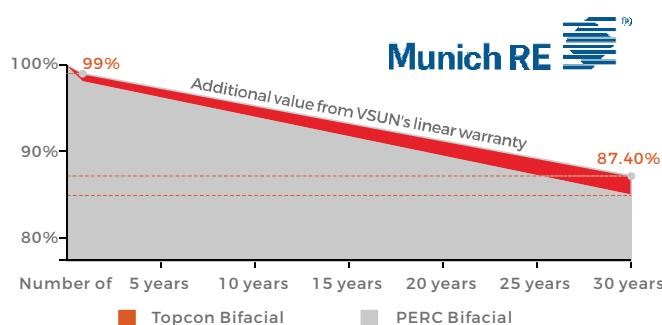
ABOUT VSUN

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	VSUN455N-108BMH-DG	VSUN450N-108BMH-DG	VSUN445N-108BMH-DG	VSUN440N-108BMH-DG
Maximum Power - Pmax (W)	455	450	445	440
Open Circuit Voltage - Voc (V)	40.16	39.92	39.64	39.38
Short Circuit Current - Isc (A)	14.02	13.96	13.9	13.85
Maximum Power Voltage - Vmpp (V)	34.09	33.87	33.61	33.37
Maximum Power Current - Impp (A)	13.35	13.29	13.23	13.18
Module Efficiency	23.30%	23.04%	22.79%	22.53%

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 450 front)

Pmax (W)	Voc (V)	Isc (A)	Vmpp (V)	Impp (A)	Pmax gain
473	39.92	14.66	33.87	13.95	5%
495	39.92	15.36	33.87	14.62	10%
540	39.99	16.75	33.8	15.95	20%
563	39.99	17.45	33.8	16.61	25%

Material Characteristics

Dimensions	1722×1134×30mm (L×W×H) 67.80*44.65*1.18 inches (L×W×H)
Weight	24.7kg / 54.45lbs
Frame	Silver anodized aluminum profile
Front Glass	AR-coating Semi-toughened glass, 2.0mm
Back Glass	Glazed & Semi-toughened glass, 2.0mm
Cells	12×9 pcs mono solar cells series strings
Junction Box	IP68, 3 diodes
Cable	Potrait: 500 mm (cable length can be customized) , 1×4 mm2 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)	1760×1125×1253mm / 69.29*44.29*49.33inches
Quantity per pallet	35pcs
Container 20'	210
Container 40'	455
Container 40'HC	910or 735 for US

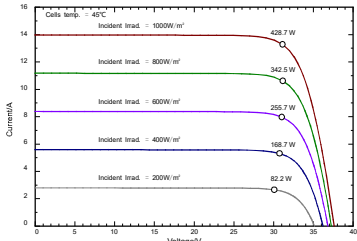
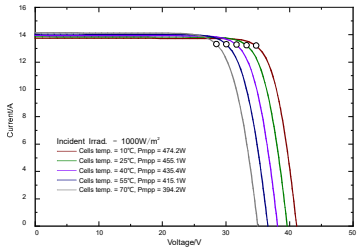
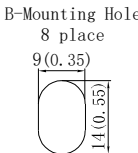
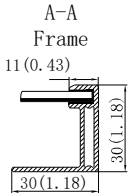
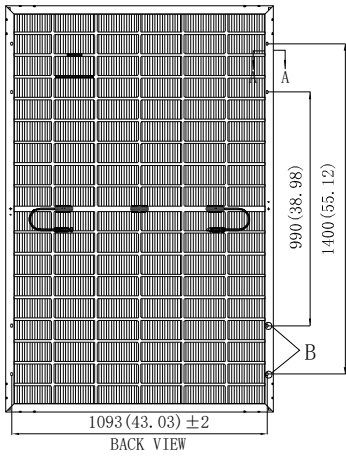
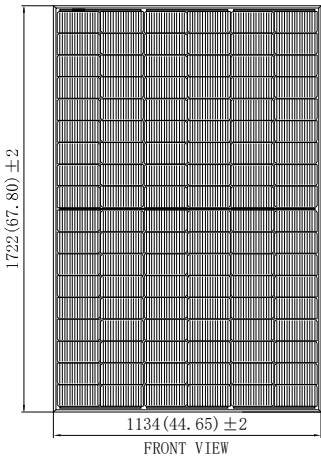
Temperature Characteristics

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

Note:mm (inch)



Excellent performance under weak light condition.