



12
YEAR
QUALITY ASSURANCE

30
YEAR
POWER OUTPUT GUARANTEE

VSUN590N-144BMH-DG

VSUN590N-144BMH-DG

VSUN585N-144BMH-DG

VSUN580N-144BMH-DG

VSUN575N-144BMH-DG

VSUN570N-144BMH-DG

VSUN565N-144BMH-DG

590W

Highest power output

22.84%

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

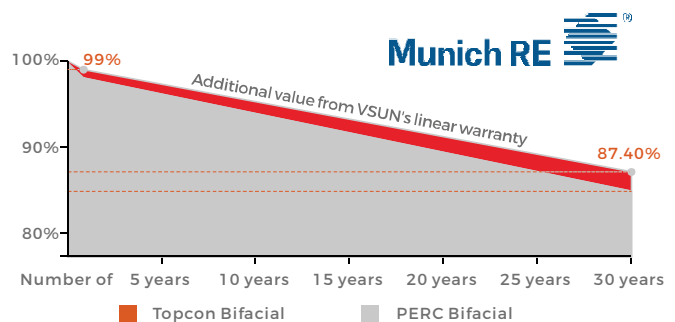
ABOUT VSUN

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 was 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 | VSUN590N-144BMH-DG | VSUN585N-144BMH-DG | VSUN580N-144BMH-DG | VSUN575N-144BMH-DG | VSUN570N-144BMH-DG | VSUN565N-144BMH-DG |
|----------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Maximum Power - Pmax (W) | 590 | 585 | 580 | 575 | 570 | 565 |
| Open Circuit Voltage - Voc (V) | 51.79 | 51.65 | 51.44 | 51.26 | 51.07 | 50.87 |
| Short Circuit Current - Isc (A) | 14.49 | 14.44 | 14.37 | 14.31 | 14.25 | 14.19 |
| Maximum Power Voltage - Vmpp (V) | 43.11 | 42.92 | 42.7 | 42.53 | 42.34 | 42.14 |
| Maximum Power Current - Imp (A) | 13.69 | 13.65 | 13.6 | 13.54 | 13.48 | 13.41 |
| Module Efficiency | 22.84% | 22.65% | 22.45% | 22.26% | 22.07% | 21.87% |

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 585 front)

| Pmax (W) | Voc (V) | Isc (A) | Vmpp (V) | Imp (A) | Pmax gain |
|----------|---------|---------|----------|---------|-----------|
| 614 | 51.65 | 15.16 | 42.92 | 14.33 | 5% |
| 644 | 51.65 | 15.88 | 42.92 | 15.02 | 10% |
| 702 | 51.73 | 17.33 | 42.84 | 16.38 | 20% |
| 731 | 51.73 | 18.05 | 42.84 | 17.06 | 25% |

Material Characteristics

| | |
|--------------|---------------------------------------------------------------------------------|
| Dimensions | 2278×1134×35mm (L×W×H) 89.69*44.65*1.38 inches (L×W×H) |
| Weight | 32.7kg / 72.09lbs |
| Frame | Silver anodized aluminum profile |
| Front Glass | AR-coating Semi-toughened glass, 2.0mm |
| Back Glass | Glazed & Semi-toughened glass, 2.0mm |
| Cells | 12×12 pcs mono solar cells series strings |
| Junction Box | IP68, 3 diodes |
| Cable | Potrait: 500 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 |
| 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) | 2310×1125×1253mm / 90.94*44.29*49.33inches |
| Quantity per pallet | 30 pcs |
| Container 20' | 150 |
| Container 40' | 300 |
| Container 40'HC | 600 or 540 for US |

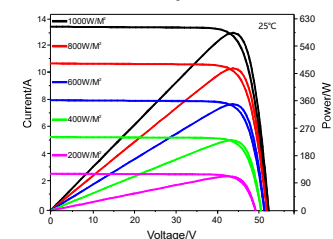
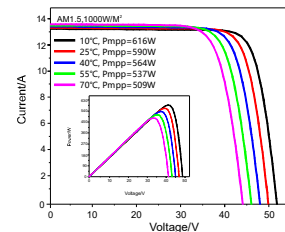
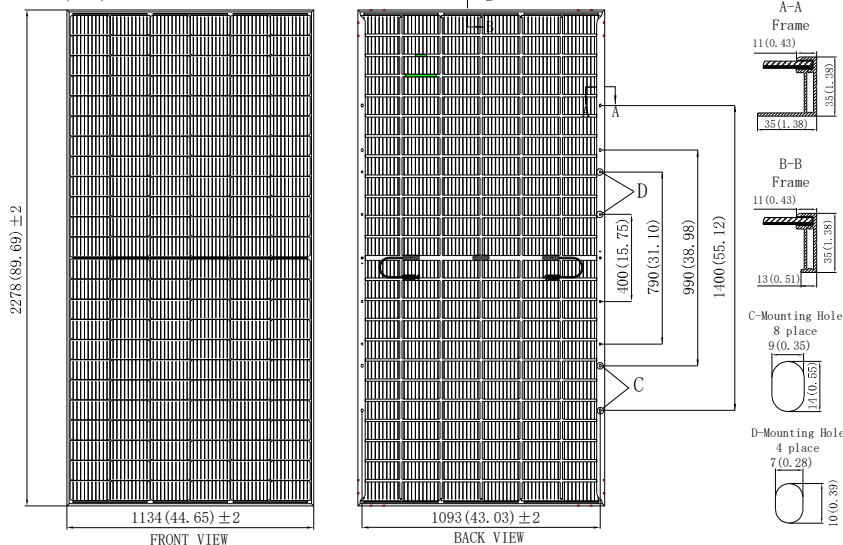
Temperature Characteristics

| | |
|---------------------------------|------------|
| 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.