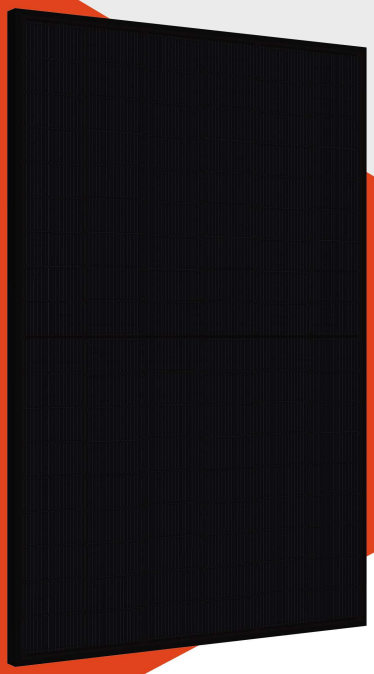
VSUN
Innovative & Smart



25 YEAR
QUALITY ASSURANCE

30 YEAR
POWER OUTPUT GUARANTEE

VSUN440N-108BMH-BB

VSUN440N-108BMH-BB
VSUN435N-108BMH-BB
VSUN430N-108BMH-BB
VSUN425N-108BMH-BB
VSUN420N-108BMH-BB
VSUN415N-108BMH-BB

440W
Highest power output

22.53%
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

0~3% Positive tolerance offer

Bifacial cells, converting more sunlight into electricity

Better shading tolerance

Better temperature coefficient

Excellent PID Resistance

Lower LCOE

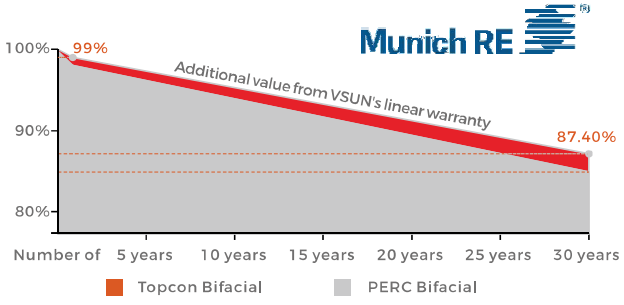
UL 61730 & CSA 61730
IEC 61215 & IEC 61730

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



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Electrical Characteristics at Standard Test Conditions(STC)

Module Type	VSUN440N-108BMH-BB	VSUN435N-108BMH-BB	VSUN430N-108BMH-BB	VSUN425N-108BMH-BB	VSUN420N-108BMH-BB	VSUN415N-108BMH-BB
Maximum Power - Pmax (W)	440	435	430	425	420	415
Open Circuit Voltage - Voc (V)	39.38	39.12	38.84	38.56	38.27	38
Short Circuit Current - Isc (A)	13.85	13.8	13.75	13.7	13.65	13.6
Maximum Power Voltage - Vmpp (V)	33.37	33.13	32.88	32.64	32.38	32.13
Maximum Power Current - Impp (A)	13.18	13.13	13.08	13.02	12.97	12.92
Module Efficiency	22.53%	22.28%	22.02%	21.76%	21.51%	21.25%

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 435 front)

Pmax (W)	Voc (V)	Isc (A)	Vmpp (V)	Impp (A)	Pmax gain
457	39.12	14.49	33.13	13.79	5%
478	39.12	15.18	33.13	14.44	10%
521	39.20	16.56	33.05	15.76	20%
542	39.20	17.25	33.05	16.41	25%

Material Characteristics

Dimensions	1722×1134×30mm (L×W×H) 67.80*44.65*1.18 inches (L×W×H)
Weight	21.4kg / 47.18lbs
Frame	Black anodized aluminum profile
Front Glass	AR-Coating toughened glass, 3.2 mm
Back sheet	Transparent black-mesh backsheet
Cells	12×9 pcs mono solar cells series strings
Junction Box	IP68, 3 diodes
Cable	Potrait: 1300 mm Staubli MC4 connector, 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 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

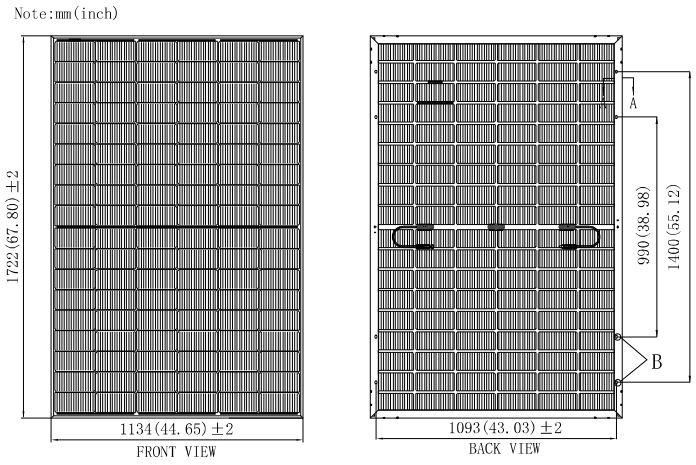
Packaging

Dimensions(L×W×H)	1760×1125×1253mm / 69.29*44.29*49.33inches
Quantity per pallet	36 pcs
Container 20'	216
Container 40'	468
Container 40'HC	936 or 828 for US

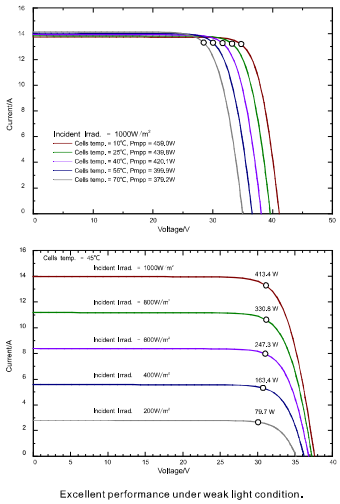
Temperature Characteristics

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



Excellent performance under weak light condition.

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