

# VSUN415-144BMH-DG

**415W**

Highest power output

**20.36%**

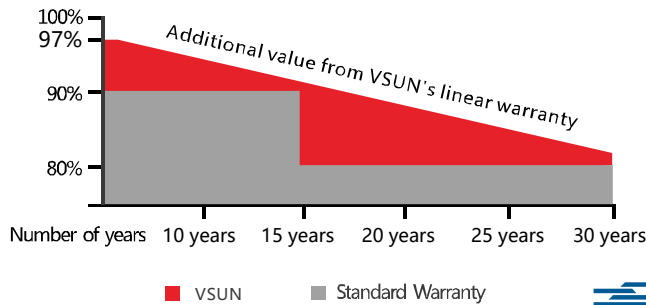
Module efficiency

**12years**

Material & Workmanship warranty

**30years**

Linear power output warranty



■ VSUN

■ Standard Warranty

**Munich RE**



PERC cell technology



Higher output power



Lower risk of micro-crack



Positive tolerance offer



Lower risk of hot spot



Better shading tolerance



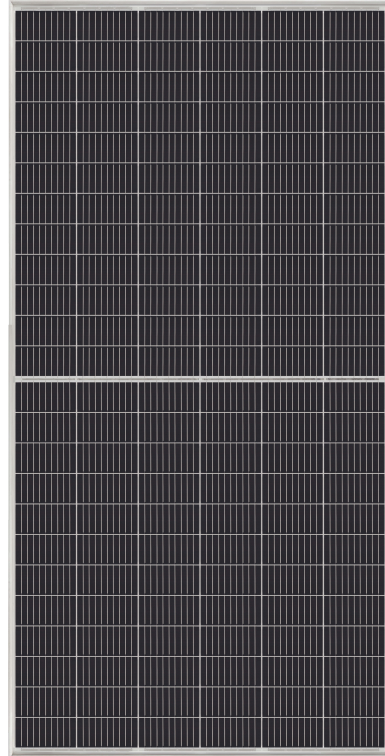
Certified for salt/ammonia corrosion resistance



Load certificates: wind to 2400Pa and snow to 5400Pa



Lower LCOE



VSUN415-144BMH-DG VSUN410-144BMH-DG  
VSUN405-144BMH-DG VSUN400-144BMH-DG

VSUN, a BNEF Tier-1 PV module manufacturer invested by Fuji Solar, has been committed to providing greener, cleaner and more intelligent renewable energy solutions. VSUN is dedicated to bringing reliable, customized and high-efficient products into various markets and customers worldwide



Engineered in Japan  
[www.vsun-solar.com](http://www.vsun-solar.com)

## Electrical Characteristics at Standard Test Conditions(STC)

Module Type	VSUN415-144BMH-DG	VSUN410-144BMH-DG	VSUN405-144BMH-DG	VSUN400-144BMH-DG
Maximum Power - Pmax (W)	415	410	405	400
Open Circuit Voltage - Voc (V)	49	48.8	48.6	48.4
Short Circuit Current - Isc (A)	10.71	10.63	10.56	10.47
Maximum Power Voltage - Vmpp (V)	40.9	40.7	40.5	40.3
Maximum Power Current - Impp (A)	10.15	10.08	10.01	9.93
Module Efficiency	20.36%	20.12%	19.87%	19.63%

Standard Test Conditions (STC): irradiance 1,000 W/m<sup>2</sup>; 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 410 front)

Pmax (W)	Voc (V)	Isc (A)	Vmpp (V)	Impp (A)	Pmax gain
431	48.80	11.16	40.70	10.58	5%
451	48.80	11.69	40.70	11.09	10%
491	48.90	12.76	40.60	12.10	20%
512	48.90	13.29	40.60	12.60	25%

## Temperature Characteristics

NOCT	45°C(±2°C)	Maximum System Voltage [V]	1000/1500
Voltage Temperature Coefficient	-0.26%/°C	Series Fuse Rating [A]	20
Current Temperature Coefficient	+0.054%/°C	Bifaciality	70%±5%
Power Temperature Coefficient	-0.32%/°C		

## Maximum Ratings

## Material Characteristics

Dimensions	2030×1004×35mm (L×W×H)
Weight	25.4kg
Frame	Silver anodized aluminum profile
Front Glass	High transparency,Antireflection coated,Semi-toughened safety glass,2.0mm
Cell Encapsulation	EVA (Ethylene-Vinyl-Acetate)or POE
Back Glass	Glazed & Semi-toughened safety glass,2.0mm
Cells	12×12 pieces bifacial monocrystalline solar cells series strings
Junction Box	IP68, 3 diodes
Cable&Connector	Potrait: 500 mm (cable length can be customized) , 1×4 mm 2 , compatible with MC4

## Packaging

Dimensions(L×W×H)	2060×1125×1134mm	Temperature Range	-40 °C to + 85 °C
Container 20'	300	Withstanding Hail	Maximum diameter of 25 mm with impact speed of 23 m/s
Container 40'	660	Maximum Surface Load	5,400 Pa
Container 40'HC	715	Application class	class A

## System Design

## Dimensions

