



DREAMAX^{series} VL-480W-210M/96 BIFACIAL

Bifacial Monocrystalline PERC Module

1796×1303×35 **210×105**

Module dimensions (mm) Cell size (mm)

96 CELL **455-480Wp**

Mono PERC module Power output

1500V DC **21.04%**

Max. system voltage Max. efficiency



KEY FEATURES

- Higher Power Output**
Module power increases by 5-25% generally, bringing significantly lower LCOE and higher IRR. 0-5w positive tolerance output warranty.
- Most Advanced Production Technologies**
Optimize module current profile, improve system-side power generation.
- Multi Busbar Technology**
By improving optical utilization rate, power increases by 2~3% and efficiency increases by 0.4~0.6%.
- PID Resistance**
Excellent Anti-PID performance guarantee via optimized mass-production process and material control.
- Low-light Performance**
Excellent performance in low light.
- Enhanced Mechanical Load**
Certified to withstand: wind load (2400 Pa) and snow load (5400 Pa).
- Durability Against Extreme Environmental Conditions**
High salt mist and ammonia resistance certified by TUV NORD.
- EL Full Inspection**
Dual stage 100% EL Inspection warranting defect-free product.

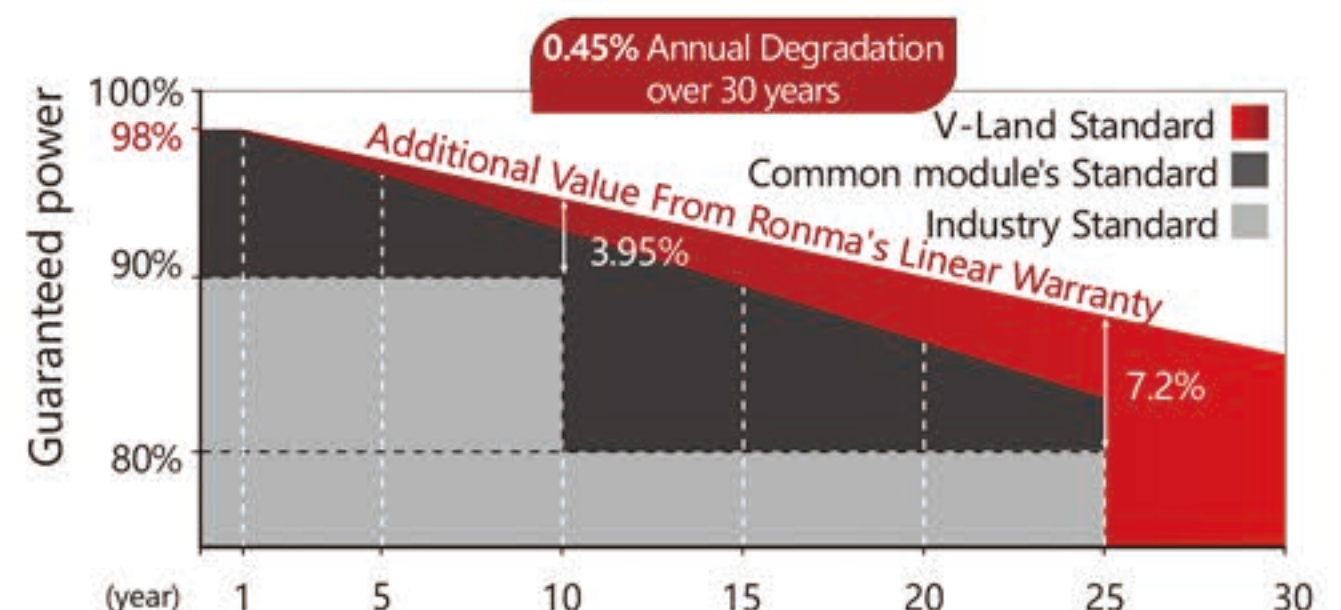


Comprehensive Products and System Certificates

- IEC61215/IEC61730/IEC61701/IEC62716
- ISO 9001: Quality Management System
- ISO 14001: Environmental Management System
- ISO14064: Greenhouse Gases Emissions Verification
- OHSAS 18001: Occupational Health and Safety Management System

LINEAR PERFORMANCE WARRANTY

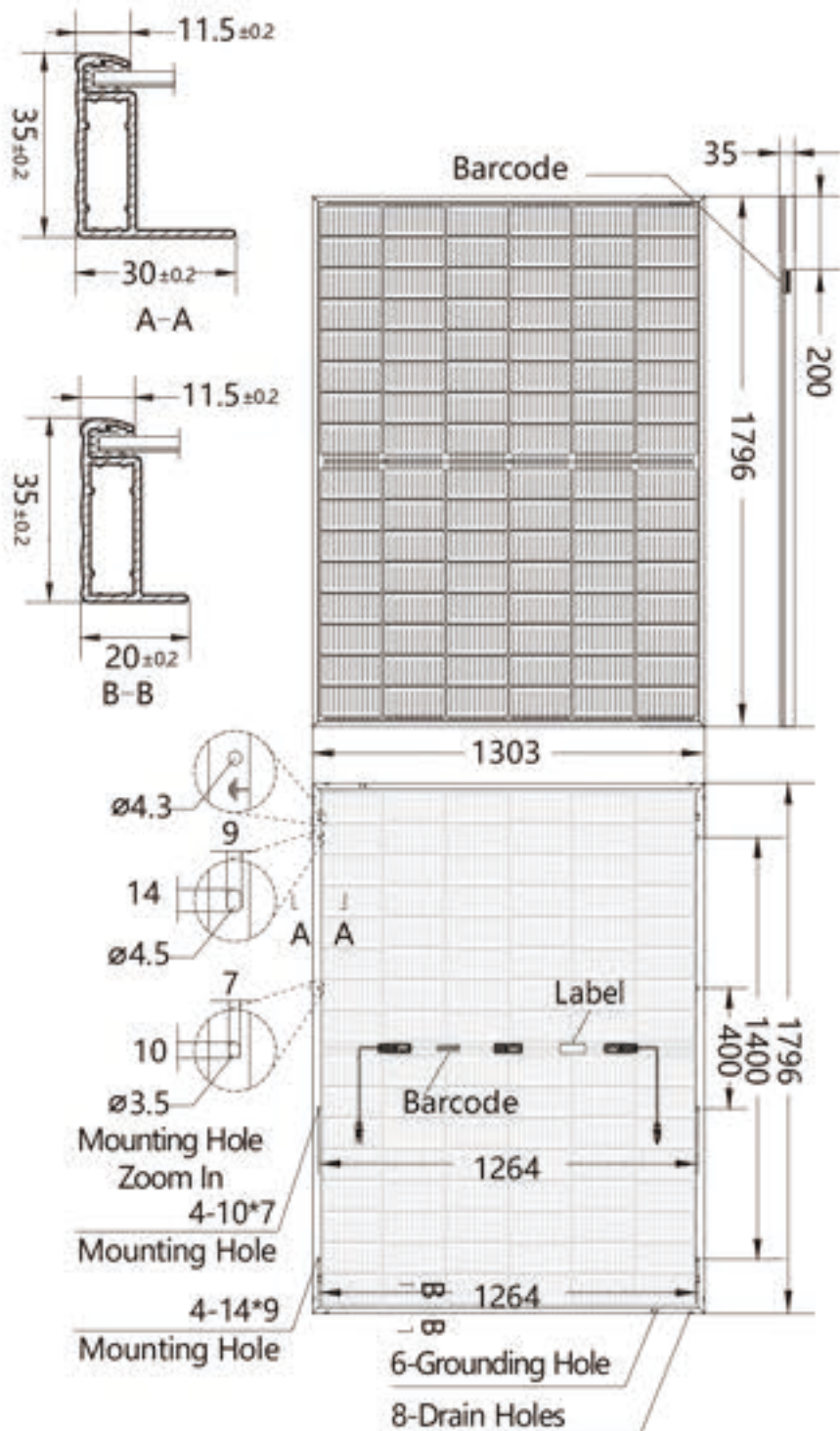
12-year product warranty / 30-year linear power warranty





Dimensions of PV Module

Unit: mm



ELECTRICAL DATA(STC)

Model Number	VL-455W-210M/96B	VL-460W-210M/96B	VL-465W-210M/96B	VL-470W-210M/96B	VL-475W-210M/96B	VL-480W-210M/96B
Rated Power in Watts-Pmax(Wp)	455	460	465	470	475	480
Open Circuit Voltage-Voc(V)	32.30	32.50	32.70	32.90	33.10	33.30
Short Circuit Current-Isc(A)	18.01	18.06	18.11	18.16	18.21	18.26
Max. Power Voltage-Vmpp(V)	26.80	27.00	27.20	27.40	27.60	27.80
Max. Power Current-Impp(A)	17.00	17.05	17.11	17.16	17.22	17.27
Module Efficiency(%)	19.94	20.16	20.38	20.60	20.82	21.04

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM 1.5,
NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

Electrical characteristics with different rear side power gain (reference to 480Wp front)

Bifacial Gain *	Pmax/W	Voc/V	Isc/A	Vmpp/V	Impp/A
5%	504	33.30	19.17	27.80	18.13
10%	528	33.30	20.09	27.80	19.00
15%	552	33.30	21.00	27.80	19.86
20%	576	33.30	21.90	27.80	20.72
25%	600	33.30	22.83	27.80	21.59
30%	624	33.30	23.74	27.80	22.45

* Bifacial Gain: The additional gain from the rear side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

MECHANICAL DATA

Solar Cells	Monocrystalline
Cell Size	210mm×105mm
Cell Configuration	96 Cells (6×8+6×8)
Module Dimensions	1751×1303×35mm
Weight	30.0kg
Front Glass	High Transmission, Low Iron, Tempered Arc Glass 2.0mm
Back Glass	High Transmission, Low Iron, Tempered Arc Glass 2.0mm
Frame	Anodized Aluminium Alloy Type 6005 T6 , Silver Color
J-box	PV-RM01, IP68, 1500V DC, 3 Diodes
Cables	4.0mm ² , (+) 300mm, (-) 300mm (connector Included)
Connector	MC4-compatible

TEMPERATURE & MAXIMUM RATINGS

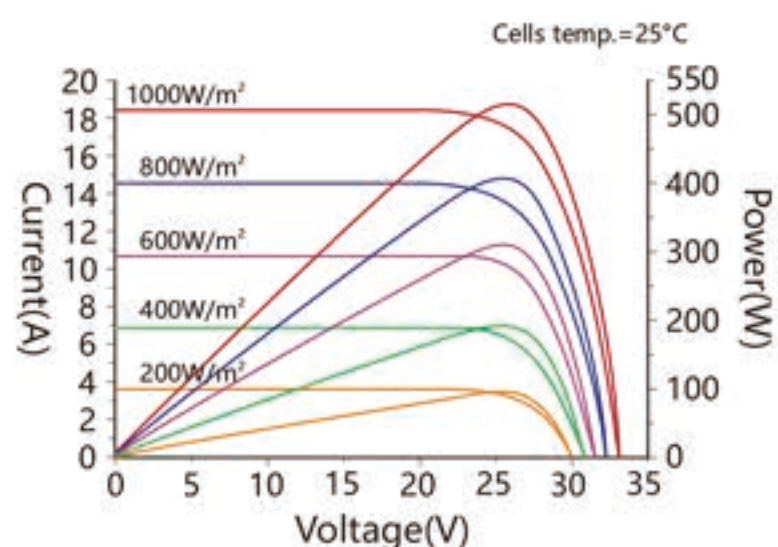
Nominal Operating Cell Temperature (NOCT)	44°C ± 2°C
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	0.04%/°C
Temperature Coefficient of Pmax	-0.36%/°C
Operational Temperature	-40°C ~ +85°C
Max. System Voltage	1500V DC
Max. Series Fuse Rating	30A

PACKAGING CONFIGURATION

	40ft (HQ)
Number of Modules Per Container	390
Number of Modules Per Pallet	30
Number of Pallets Per Container	13
Packaging Box Dimensions (l×w×h) (mm)	1780×1120×1445
Box Gross Weight (kg)	785

VL-480W-210M/96B

I-V characteristics at different irradiances



I-V characteristics at different temperatures

