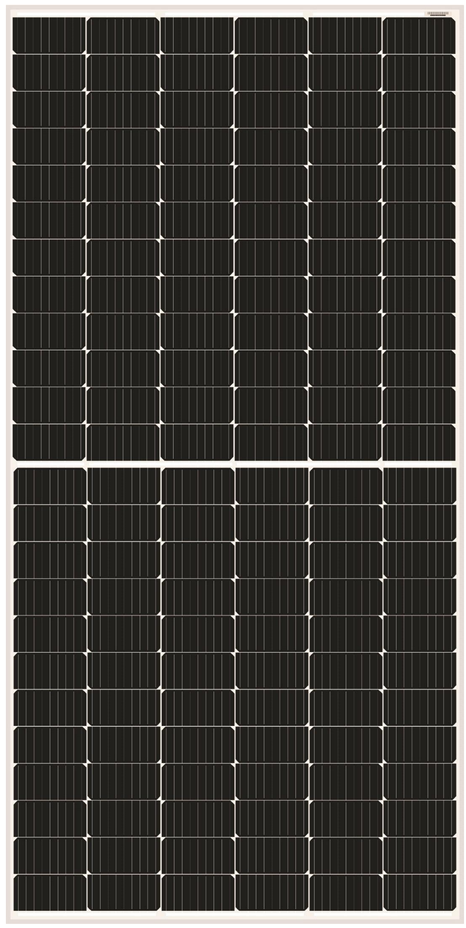
Unite Solar Technology Co., Ltd.
www.unite-solar.com

166 Series MONOCRYSTALLINE

144 Half-Cells Solar Modules

435-465W



➢ Key Features

® Advanced production equipment, International first-class production technology, Achieved high module conversion efficiency 21.27%

® Excellent performance for resist wind pression and snow load, Full module passed wind pression (2400Pa) and snow load (5400Pa) test

® Excellent weak light performance, Resistant to salt spray and ammonia corrosion

® Passing the certification test of photovoltaic standards

® Application grade: A grade, Safe class: Ⅱ, Fireproofing grade: C

High Power Output

* Reduce BOS cost with higher power bin and 1000V/1500V system voltage
* Back surface field
* Selective emitter

Half-cell design brings higher efficiency

•New cell string layout and split J-box location to reduce the energy loss caused by shading between modules
* Low thermal coefficients for greater energy production at high operating temperatures
* Low cell connection power loss due to half-cell layout (144cells) Monocrystalline

Highly reliable due to stringent quality control

* In-house testing goes well beyond certification requirements (UV, TC, HF, and many more)
* PID resistant

Certified to withstand the most challenging environmental conditions

* 2400 Pa wind load
* 5400 Pa snow load

➢ Comprehensive Products And System Certificates

IEC61215/IEC61730/UL1703/IEC61701 /IEC62716

ISO 9001: Quality Management System

ISO 14001: Enviromental Management System

OHSAS 18001

GB/T 23001 -2017

ELECTRICAL CHARACTERISTICSAT STC							
Maximum Power (P_{max})	435W	440W	445W	450W	455W	460W	465W
Open Circuit Voltage (V_{OC})	49.6V	49.8V	50.0V	50.2V	50.4V	50.6V	50.8V
Short Circuit Current (I_{SC})	11.10A	11.16A	11.22A	11.28A	11.34A	11.40A	11.46A
Voltage at Maximum Power (V_{mp})	41.2V	41.4V	41.6V	41.8V	42.0V	42.2V	42.4V
Current at Maximum Power (I_{mp})	10.56A	10.63A	10.70A	10.77A	10.84A	10.91A	10.97A
Module Efficiency (%)	19.90	20.13	20.36	20.58	20.81	21.04	21.27
Operating Temperature	-40°C to +85°C						
Maximum System Voltage	1000V DC/ 1500V DC						
Fire Resistance Rating	Type 1(in accordance with UL1703)/Class C(IEC61730)						
Maximum Series Fuse Rating	20A						

STC: Irradiance 1000W/m^2 , Cell temperature 25°C, AM1.5; Tolerance of Pmax: ±3%; Measurement Tolerance: ±3%

ELECTRICAL CHARACTERISTICSAT NOCT							
Maximum Power (P_{max})	323W	327W	331W	335W	339W	343W	347W
Open Circuit Voltage (V_{OC})	45.6V	45.8V	46.0V	46.2V	46.4V	46.6V	46.8V
Short Circuit Current (I_{SC})	8.99A	9.04A	9.09A	9.14A	9.19A	9.24A	9.29A
Voltage at Maximum Power (V_{mp})	37.4V	37.6V	37.8V	38.0V	38.2V	38.4V	38.6V
Current at Maximum Power (I_{mp})	8.64A	8.70A	8.76A	8.82A	8.88A	8.94A	8.99A

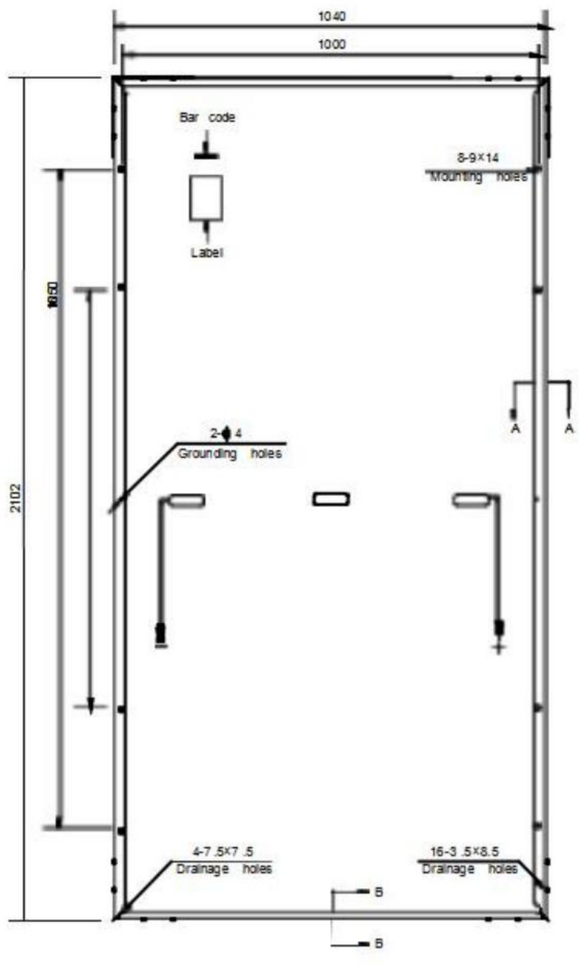
NOCT: Irradiance 800W/m^2 , Ambient temperature 20°C, Wind Speed 1 m/s

MECHANICAL CHARACTERISTICS	
Cell type	Monocrystalline PERC 166*83mm
Number of cells	144 (6x24)
Module dimensions	2102x1040x30mm (82.76x40.94x1. 18inches)
Weight	24kg (52.9lbs)
Front cover	3.2mm (0. 13inches) tempered glass with AR coating
Frame	Anodized aluminum alloy
Junction box	IP68, 3 diodes
Cable	4mm^2 (0.006inches^2), Length: Portrait: 300mm (11.81inches); Landscape: 1400mm (55. 12inches)
Connector	MC4 or MC4 compatible

TEMPERATURE CHARACTERISTICS	
Nominal Operating Cell Temperature (NOCT)	43°C±2°C
Temperature Coefficients of P_{max}	-0.36%/°C
Temperature Coefficients of V_{OC}	-0.28%/°C
Temperature Coefficients of I_{SC}	0.05%/ °C

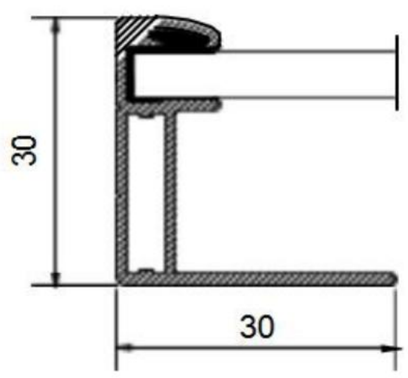
PACKAGING	
Standard packaging	36pcs/pallet
Module quantity per 20' container	180pcs
Module quantity per 40' container	847pcs

ENGINEERING DRAWINGS

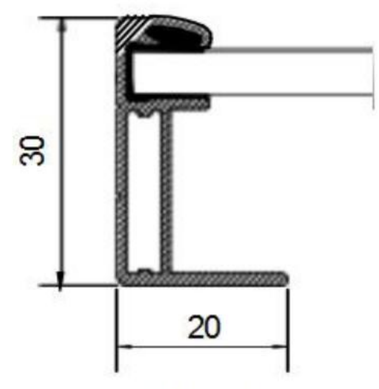


Rear View

Unit: mm

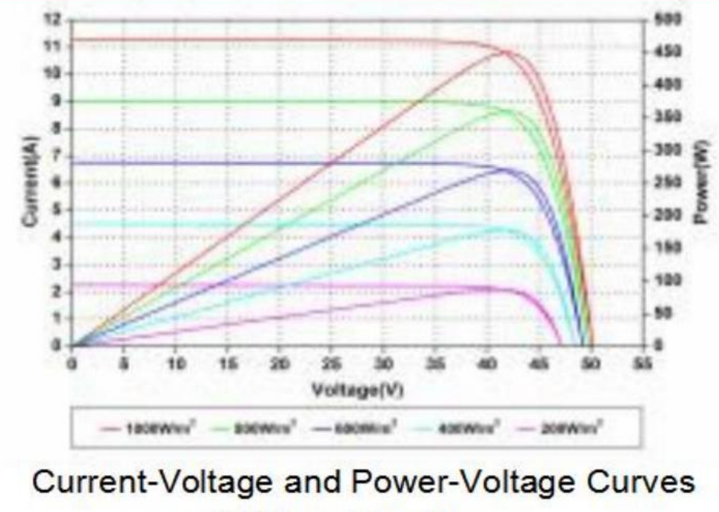


Section A-A

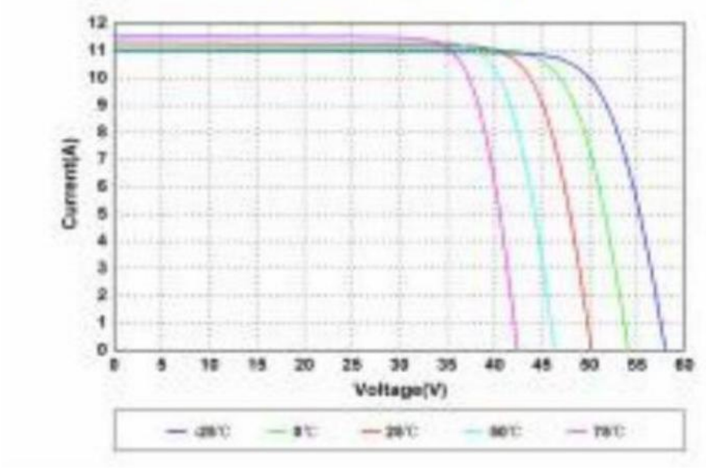


Section B-B

IV CURVES



Current-Voltage and Power-Voltage Curves at Different Irradiances



Current-Voltage Curves at Different Temperatures