



# CE-435/440/445/450/455HM

## M6/166mm Cell.144 Half-Cell Layout



### Higher Efficiency

The highest efficiency of the series is up to 20.93%.



### High Reliability

Superior craftsmanship, engineering excellence, and attention to the finest detail ensure longevity and optimal performance.



### Low-Light Performance

Excellent power generation performance under Low-light.



### Extremely Environmental Testing

Remain peak performance in extreme environments.



### Strength and Durability

Certified for 5400Pa snow and 2400Pa loads test.



### PID Free

Certified for Anti-PID under 85 degrees Celsius, 85% RH for 288 hours.



## Centro Energy Electric Quality

For more than 10 years, we have been perfecting our PV modules to bring you the highest quality products possible.

Automated cell and module production lines ensure consistently high quality in every module.

Each cell and module flash tested to ensure rated level of output.

Aesthetically pleasing black frame and cells.

Lead-free solder protects health and the environment.

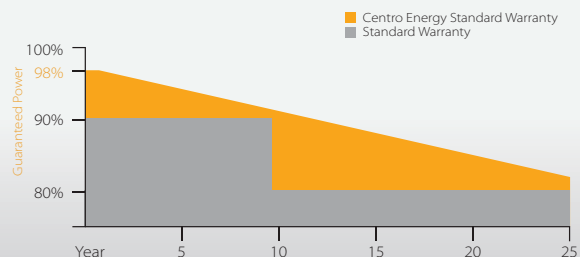
## System Certification

- ISO 9001:2015
- ISO 14001:2015

## Authorised Photovoltaic Certificates



## 25 Years Performance Warranty



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M6/166mm Cell.144 Half-Cell Layout

## Electrical Characteristics under STC\*

Module Type	CE-435HM	CE-440HM	CE-445HM	CE-450HM	CE-455HM
Max.power (Pmax) [W]	435	440	445	450	455
Max.power voltage (Vmp) [V]	40.8	41.0	41.2	41.4	41.6
Max.power current (Imp) [A]	10.67	10.74	10.8	10.87	10.94
Open circuit voltage (Voc) [V]	49.4	49.6	49.8	50.0	50.2
Short circuit current (Isc) [A]	11.26	11.33	11.40	11.47	11.54
Max.series fuse rating [A]	20	20	20	20	20
Power tolerance [W]	0/+5	0/+5	0/+5	0/+5	0/+5
Max.system voltage [V]	1500	1500	1500	1500	1500
Solar panel efficiency [%]	20.01	20.24	20.47	20.70	20.93

## Temperature characteristics

Temperature(NOCT)[°C]	45±2
Temp.coefficient of Pmax[%/°C]	-0.370
Temp.coefficient of Voc[V/°C]	-0.286
Temp.coefficient of Isc[mA/°C]	0.057

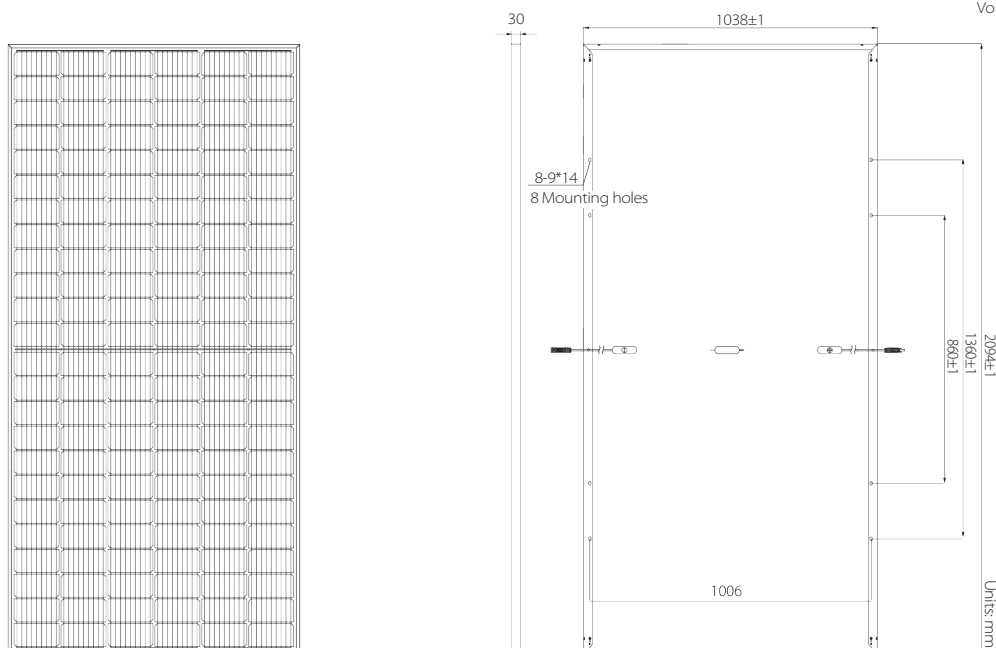
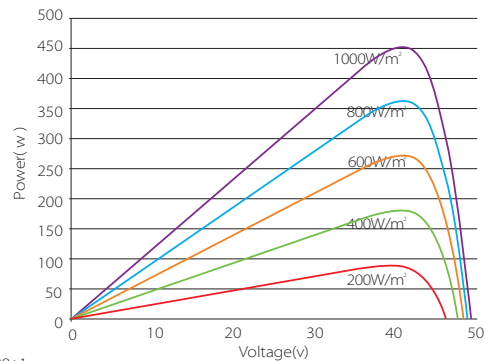
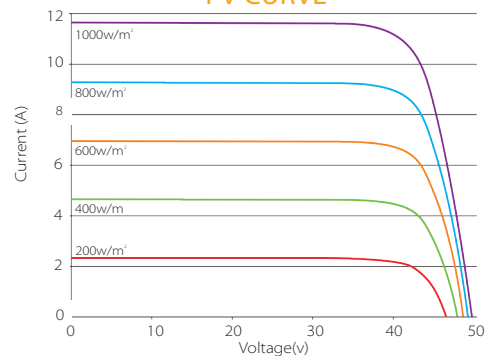
## Mechanical Characteristics

Dimension	2094×1038×30mm
Weight	24kg
Front Glass	3.2mm, Coated Tempered Glass
Solar Cell	144(6×24)
Frame	Anodized Aluminum Alloy
Junction Box	IP 68, 3 diodes
Cable	4mm <sup>2</sup> , Length 300mm
Connector	MC4 Compatible

## Warranty

12 years product warranty
12 years warranty on 90% power output
25 years warranty on 80% power output

I-V CURVE



Note: Standard Test Conditions: Air mass 1.5; Irradiance = 1000W/m<sup>2</sup>; cell temp. 25°C