



M10-MBB Mono PV Module

120 Half Cells

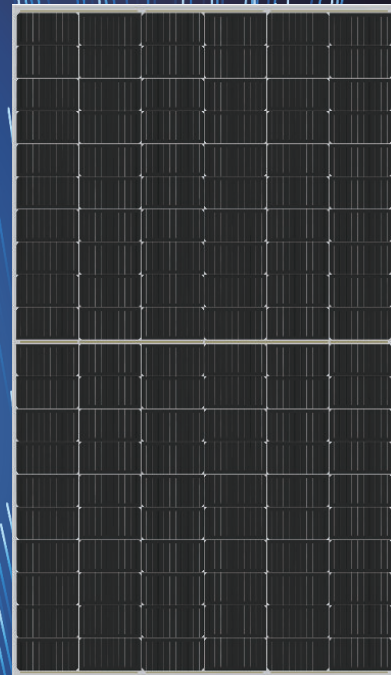


12 years Product warranty



25 years Linear power warranty

Integrated Solar Manufacturing & Technology Since 1964



440-460W /Output power

21.3% /Maximum efficiency

0~+5W /Power tolerance

Comprehensive product certification

- IEC 61215 IEC 61730
- IEC TS 62804 (PID Resistant)
- IEC 62716 (Ammonia Corrosion)
- IEC 61701 (Salt Spray Corrosion)

- IEC TS 62941 (PV quality Management System)
- ISO9001: 2015 (Quality Management System)
- ISO14001 (Environmental Management System)
- OHSAS18001 (Occupational Health and Safety Management System)



PID Resistant Guarantee

Strict selection of encapsulation materials eliminates PID risk.



Severe Weather Resilience

Withstand outdoor ultraviolet irradiation, high and low temperature changes, stable output efficiency



Hot-spot Resistance

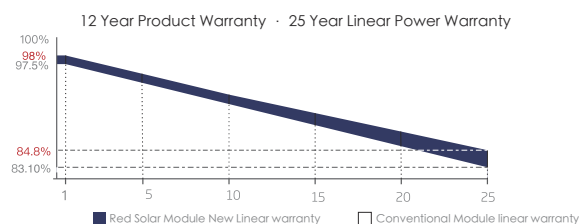
Lower internal current and power to effectively reduce hot-spot heating.



Multi Busbar Technology

Better light utilization and current collection ability, effectively improve the power output and reliability.

Excellent Power Guarantee



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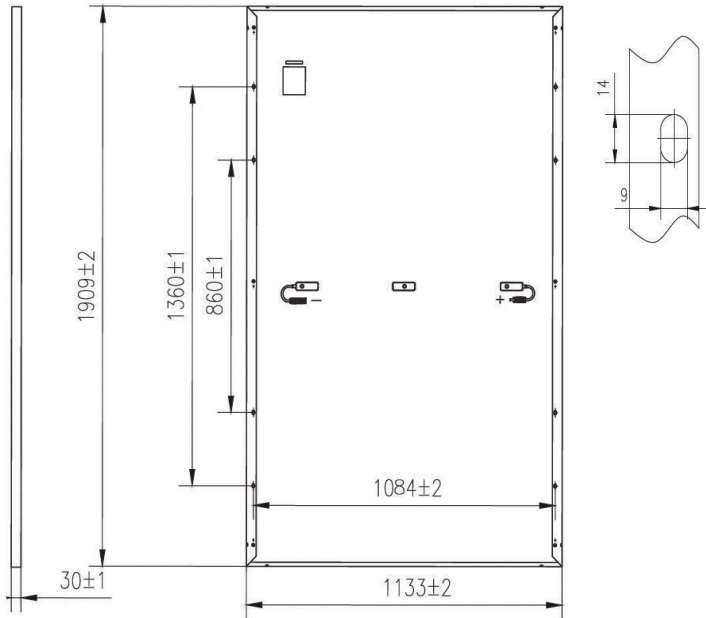
Model of PV Module

CETC-xxxM(H)/120

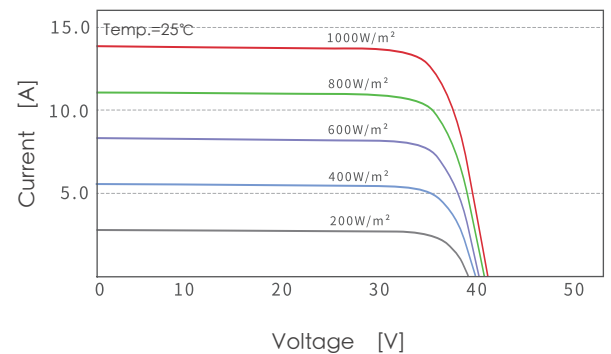
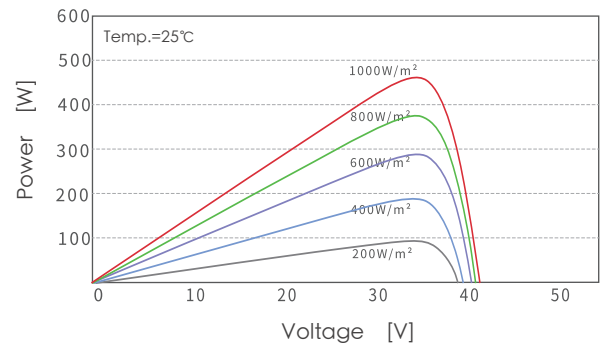
Power Range

440-460W

PV module dimensions (mm)



P-V Curves of PV Module



Electrical Parameter(STC)

Model	440M	445M	450M	455M	460M
Maximum power (W)	440	445	450	455	460
Working point voltage (V)	33.80	34.10	34.30	34.50	34.70
Working point current (A)	12.99	13.05	13.12	13.19	13.25
Open circuit voltage (V)	39.97	40.30	40.50	40.70	41.00
Short circuit current (A)	13.72	13.78	13.85	13.92	13.98
PV module efficiency	20.3%	20.6%	20.8%	21.0%	21.3%
Standard test conditions	Atmospheric quality Am1.5, Irradiance 1000W/m², Cell Temperature 25°C				

Model	440M	445M	450M	455M	460M
Maximum power (W)	321	325	329	332	336
Working point voltage (V)	30.60	30.70	30.90	31.10	31.30
Working point current (A)	10.51	10.57	10.63	10.68	10.73
Open circuit voltage (V)	36.30	36.50	36.70	36.90	37.10
Short circuit current (A)	11.07	11.13	11.19	11.24	11.29

NOCT conditions The irradiance is 800w/m², the ambient temperature is 20 degrees, and the wind speed is 1m/s

Mechanical Parameters

Module size	1909*1133*30mm
Number of solar cells	120Cells (2*6*10)
Weight	23Kg ±5%
Junction Box	IP68, 1 diodes
Cables	4mm², +:300mm/-:200mm (Customizable)
Front glass	3.2mm,Ultra white AR coated toughened glass
Static load on the front	5400Pa
Static load on the back	2400Pa

Packaging&Transport

40'HQ container transport 36 Pcs/box × 22 box = 792Pcs

Temperature Parameter Maximum Ratings

NMOT	45±2°C	Working temperature	-40~+85°C
Temperature coefficient of maximum power(Pmax)	-0.35%/°C	Maximum system voltage	1500VDC
Temperature coefficient of open circuit voltage(Voc)	-0.28%/°C	Maximum fuse rated current	25A
Temperature coefficient of short circuit current(Isc)	+0.048%/°C		



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