

# 多主栅单晶144片高效半片组件

MBB Monocrystalline Half-cell Module (144 Half Cells)

**530-550W**

输出功率 / Output power

**21.52%**

最高效率 / Maximum efficiency

**0~+5W**

功率公差 / Power tolerance

## 全面的产品和体系证书

Comprehensive product certification and system certification

- IEC 61215 IEC 61730
- IEC TS 62804(抗PID/PID Resistant)
- IEC 62716(耐氨气/Ammonia Corrosion)
- IEC 61701(耐盐雾/Salt Spray Corrosion)
- IEC TS 62941(光伏质量体系/PV quality Management System)
- ISO9001:2015(质量管理体系/Quality Management System)
- ISO14001(环境管理体系/Environmental Management System)
- OHSAS18001(职业健康安全管理体系/Occupational Health and Safety Management System)



湖南红太阳新能源科技有限公司成立于2008年，由中电科电子装备集团有限公司全资控股，是中国电子科技集团有限公司（世界500强）的成员企业。公司在长沙、北京设有两个生产基地，具备1GW高效组件智能生产能力，是首批符合《光伏制造行业规范条件》的企业。单晶、多晶组件均获“领跑者”一级认证。

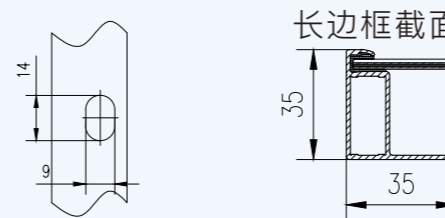
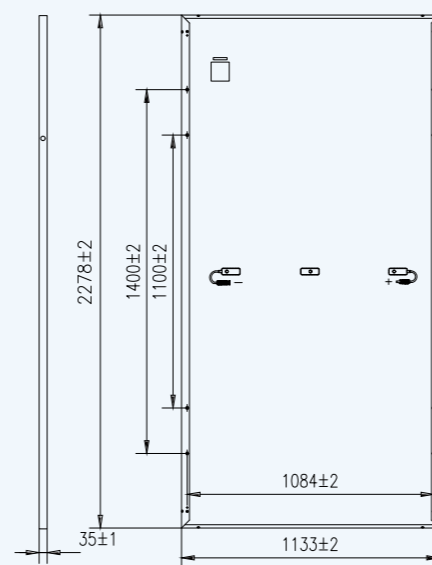
Hunan Red Solar New Energy Science and Technology Co., Ltd., established in 2008 and wholly-owned by CETC Electronics Equipment Group Co., Ltd. member of China Electronics Technology Group Co., Ltd. (Fortune Global 500). The company has two production bases in Changsha and Beijing, which have high-efficiency intelligent module production lines with annual production capacity of 1Gw. The company is the first batch of enterprises that meet the requirements of "Photovoltaic Manufacturing Industry Specification". The monocrystal and Polycrystal PV module are all certified as "top runner".



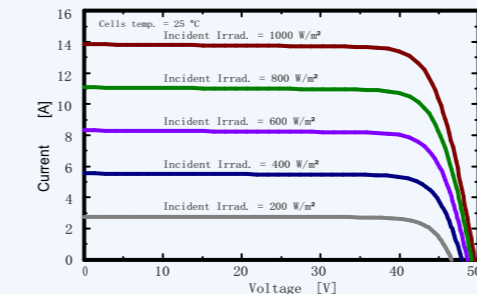
组件型号  
Model of PV Module  
CETC-xxxM(H)/144

功率范围  
Power Range  
530-550W

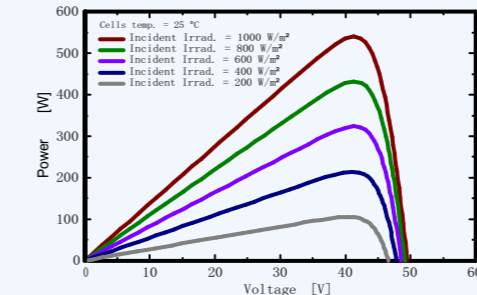
组件尺寸 (mm)  
PV Module Dimension



组件的I-V曲线  
I-V Curves of PV Module

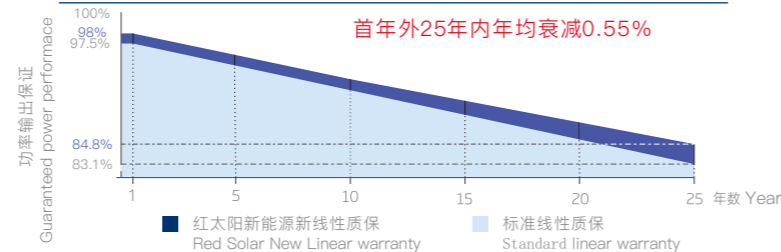


组件的P-V曲线  
P-V Curves of PV Module



- 抗PID保证 / PID Resistant Guarantee**  
严选的封装材料免除PID风险。  
Strict selection of encapsulation materials eliminates PID risk.
- 严酷环境适用性 / Severe Weather Resilience**  
经TUV NORD测试验证，通过IEC 61701耐盐雾等级6、IEC62716耐氨气测试认证。  
Verified by TUV NORD test, Passed IEC 61701 salt spray corrosion(grade 6), IEC62716 ammonia corrosion test certification.
- 抗热斑性能 / Hot-spot Resistance**  
更低的内部电流和回路功率，有效降低热斑致热。  
Lower internal current and power to effectively reduce hot-spot heating.
- 多主栅技术 / Multi Busbar Technology**  
更优的光线利用率和电流收集能力，有效提升产品功率输出和可靠性。  
Better light utilization and current collection ability, effectively improve the power output and reliability.

**12年产品质保 · 25年线性功率保证**  
12 Year Product Warranty · 25 Year Linear Power Warranty



电气参数 (STC) / Electrical Parameter(STC)					
型号/Model	530M	535M	540M	545M	550M
最大功率/Maximum power	530	535	540	545	550
工作点电压/Working point voltage	41.35	41.50	41.65	41.80	41.95
工作点电流/Working point current	12.83	12.90	12.97	13.04	13.12
开路电压/Open circuit voltage	49.20	49.35	49.50	49.65	49.80
短路电流/Short circuit current	13.72	13.78	13.85	13.92	13.98
组件效率/PV module efficiency	20.53%	20.73%	20.92%	21.12%	21.31%
标准测试条件/Standard test conditions	大气质量AM1.5, 辐照度1000W/m², 电池温度25°C Atmospheric quality Am1.5, Irradiance 1000w/m², Cell Temperature 25°C				

电气参数 (NMOT) / Electrical Parameters (NMOT)					
型号/Model	530M	535M	540M	545M	550M
最大功率/Maximum power	395	398	402	405	409
工作点电压/Working point voltage	37.95	38.09	38.25	38.39	38.57
工作点电流/Working point current	10.41	10.47	10.52	10.57	10.62
开路电压/Open circuit voltage	45.8	46.00	46.10	46.20	46.40
短路电流/Short circuit current	11.07	11.13	11.19	11.24	11.29
NMOT	辐照度800W/m², 环境温度20°C, 风速1m/s The irradiance is 800W/m², the ambient temperature is 20 degrees, and the wind speed is 1m/s				
在该产品目录中的电性能参数并不指一块组件，也不是合同中承诺的内容，只做不同类型组件间比较用。 The Electrical performance parameters are neither just referred to one PV panel, nor are a part of the contract; They are only used as reference.					

机械参数 / Mechanical Parameters	
组件尺寸 / Module size	2278*1133*35mm
电池片数量 / Number of solar cells	144片 (2*6*12)
重量 / Weight	27.3Kg ±5%
接线盒 / Junction Box	IP68、兼容MC4
线缆 / Cables	4mm², +300mm~-200mm (含接头, 可定制 / Customizable)
前板玻璃 / Front plate glass	3.2mm, 超白, 减反射膜钢化玻璃/3.2mm,Ultra white&Minus reflection film toughened glass
正面静态载荷 / Static load on the front	5400Pa
背面静态载荷 / Static load on the back	2400Pa

包装&运输 (Packaging&Transport)	
40尺集装箱运输 / 40'HQ container transport	31 Pcs/box × 20 box = 620 Pcs
17.5米车运输 / 17.5m truck transport	31 Pcs/box × 28 box = 868 Pcs

温度参数 / Temperature Parameter		极限参数 / Maximum Ratings	
NMOT	45±2°C	工作温度 Working temperature	-40~+85°C
最大功率(Pmax)温度系数 Temperature coefficient of maximum power(Pmax)	-0.35%/°C	最大系统电压 Maximum system voltage	1500VDC
开路电压(Voc)温度系数 Temperature coefficient of open circuit voltage(Voc)	-0.28%/°C	最大保险丝额定电流 Maximum fuse rated current	25A
短路电流(Isc)温度系数 Temperature coefficient of short circuit current(Isc)	+0.048%/°C		

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