

# 多主栅单晶144半片双面双玻组件

MBB Monocrystalline Bifacial Double-glass Module (144 Half Cells)

**530-550W**

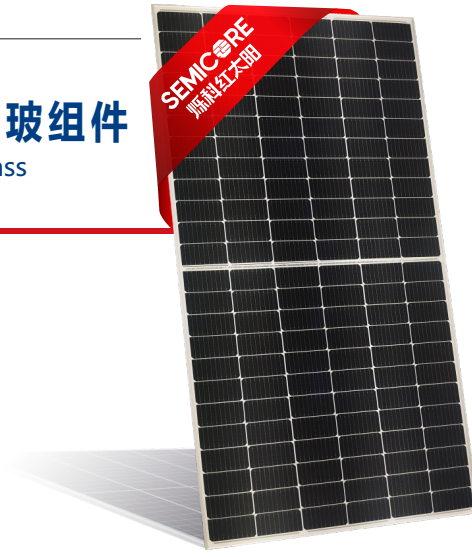
输出功率 / Output power

**21.31%**

最高效率 / Maximum efficiency

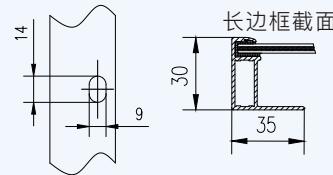
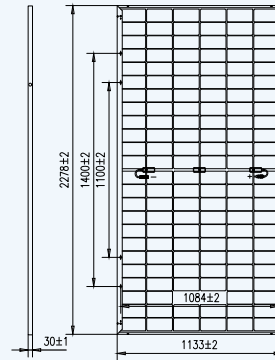
**0~+5W**

功率公差 / Power tolerance

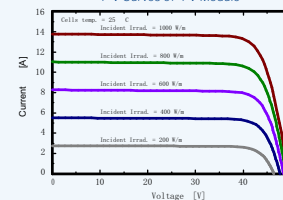


组件型号 / Model of PV Module  
CETC-xxxM(GDF)/144 | 功率范围 / Power Range  
530-550W

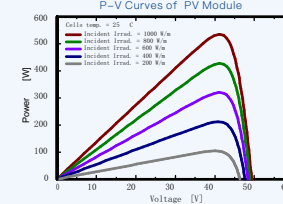
组件尺寸 (mm) / PV Module Dimension



组件的I-V曲线 / I-V Curves of PV Module

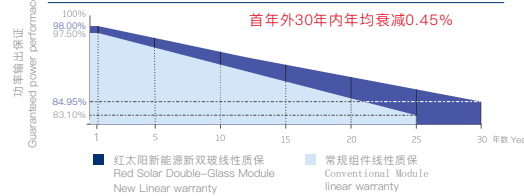


组件的P-V曲线 / P-V Curves of PV Module



- 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.
- 高收益 / High Returns**  
背面提供额外发电，提升投资收益。  
Provide additional power generation on the rear to increase return on investment.
- 高寿命 / Long Life**  
30年线性质保，更低的年度衰减率，提升投资收益。  
30-year linear warranty, lower power attenuation rate, increased return on investment.
- 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 · 30年线性功率保证  
12 Year Product Warranty · 30 Year Linear Power Warranty



## 全面的产品和体系证书

- 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）的成员单位。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 10W. The company is the first batch of enterprises that meet the requirements of "Photovoltaic Manufacturing Industry Specification". The monocrystalline and Polycrystalline PV module are all certified as "top runner".



长沙基地 / Changsha base  
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正面电气参数 (STC) / Front 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	12.82	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	13.71	13.78	13.85	13.92	13.98
组件效率/PV module efficiency	20.53%	20.73%	20.92%	21.11%	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				

背面增益后功率输出 / Rear/Side Power gain						
5%	峰值输出功率 / Maximum Power	556.9Wp	561.8Wp	567.0Wp	572.3Wp	577.5Wp
	效率 / Efficiency STC	21.56%	21.76%	21.97%	22.17%	22.37%
15%	峰值输出功率 / Maximum Power	609.9Wp	615.3Wp	621.0Wp	626.8Wp	632.5Wp
	效率 / Efficiency STC	23.61%	23.83%	24.06%	24.28%	24.50%
25%	峰值输出功率 / Maximum Power	662.9Wp	668.8Wp	675.0Wp	681.3Wp	687.5Wp
	效率 / Efficiency STC	25.66%	25.91%	26.15%	26.39%	26.64%

在该产品目录中的电性能参数并不单指一块组件，也不是合约中承诺的内容，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*30mm
电池片数量 / Number of solar cells	144片 (2*6*12)
重量 / Weight	32kg ±5%
接线盒 / Junction Box	IP67, 兼容MC4
线缆 / Cables	4mm², 线长300mm (可定制 / Customizable)
前板玻璃 / Front plate glass	镀膜超白半钢化玻璃/Ultra white AR coated semi-toughened glass
背板玻璃 / Rear plate glass	半钢化玻璃/semi-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

包装及运输 (Packaging&Transport)	
40尺集装箱运输 / 40HQ container transport	35 Pcs/box × 18 box = 630 Pcs
17.5米车运输 / 17.5m truck transport	35 Pcs/box × 32 box = 910 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	30A
短路电流(Isc)温度系数 / Temperature coefficient of short circuit voltage(Isc)	+0.048%/°C		