

# MPPT 太阳能控制器

## solar charge controller

产品介绍

PRODUCT

作为控制电源专业供应商，赛光电源运用当前最先进的 MPPT 技术，将太阳能充电效率提高到最佳水平。本控制器用于太阳能离网系统(独立系统)中，特别适用于路灯控制系统，自动调节充电和放电。控制器内部有一个先进的跟踪算法，来获取太阳能电池组件的最大功率，给蓄电池进行充电；同时，其低压断开(LVD)功能，可以防止蓄电池过度放电而造成损坏。控制器的蓄电池充电过程是经过优化的，能够延长蓄电池寿命，改善系统性能。同时，控制器具备多重自我诊断和电子保护功能，以避免用户误操作或系统故障造成控制器损坏。

As a SME manufacture of solar controller, Sunway power using the most advanced MPPT technology to rise the efficiency of solar charging to the optimum level. This controller is for off-grid PV system to control the charging and discharging of the battery, especially suitable for street light system. The controller features a smart tracking algorithm inside that maximizes the energy from the solar PV module(s) and charge the battery. At the same time, the low voltage disconnect function (LVD) will prevent the battery from over discharging. Charging process has been optimized for long battery life and improved system performance. Meanwhile, the comprehensive self-diagnostics and electronic protection functions can prevent damage from installation mistake or system faults.

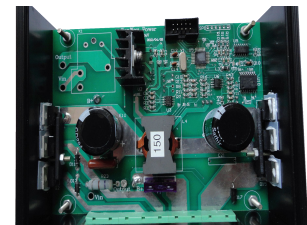
### 性能特点



- 12V&24V 蓄电池电压自动识别
- 创新性的最大功率点跟踪技术，可显著提高太阳能系统能量利用率，转换效率高达 97%
- 快速扫描整个 I-V 曲线，几秒钟就可以跟踪到光伏电池最大功率点
- 双路输出，具有光控、时控、半功率、晨亮、24 小时常输出等控制方式
- 适用于铅酸电池、胶体电池、锂-铁电池等多种蓄电池
- 采用温度补偿，自动调整充放电参数，提高蓄电池使用寿命
- 具有过充、过放、过载、短路、蓄电池防反接、太阳能防反接、开路、蓄电池掉电、防雷、太阳能夜间防反充等完善的保护功能
- 市电互补功能（可选配）

### PERFORMANCE FEATURES

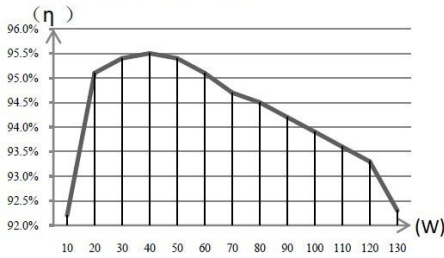
- 12V/24V auto recognition.
- Advanced maximum power point tracking technology to optimize using the solar system. Peak conversion efficiency of 95%, high Tracking efficiency of 97%.
- Very fast sweeping of the entire I-V curve, several seconds tracking speed.
- Dual-line output, light sensor and timer functions, morning lighting, constantly output 24hours.
- Be suitable for Sealed, Gel and Li-Fe battery various kinds of batteries.
- Adopting temperature compensation and correcting the charging and discharging parameters automatically, improving the battery lifetime.
- With perfect protection, such as over-charge, over-discharge, open circuit, anti-reverse connection, overload, short-circuit, solar anti-reverse charging on night. Excellent thermal design and nature air cooling.
- Utility power complementarity function. (Optional)



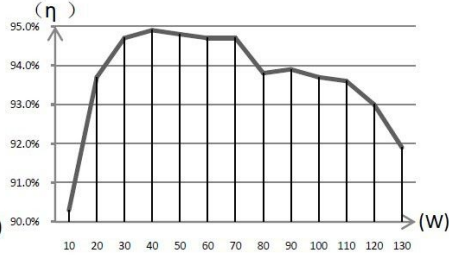
## 转化效率曲线

## Conversion Efficiency Curve

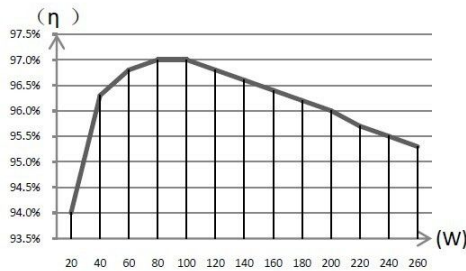
光伏组件最大功率点电压(17V) / 系统电压(12V)



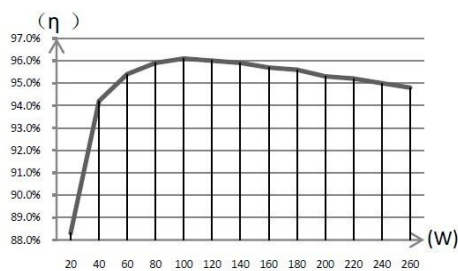
光伏组件最大功率点电压(34V) / 系统电压(12V)



光伏组件最大功率点电压(34V) / 系统电压(24V)

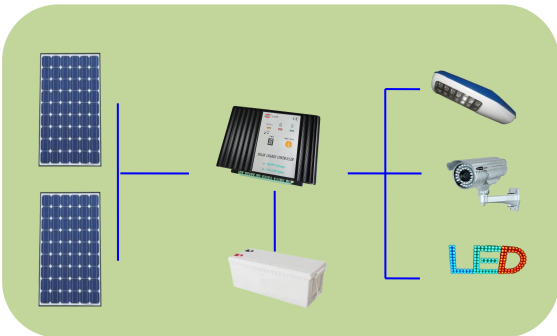


光伏组件最大功率点电压(68V) / 系统电压(24V)



## 系统拓扑图

## TOPOLOGY DIAGRAM



### 部分参数:

#### 系统参数 System Capability

光伏最大输出功率

Output Max. power

180W (12V) ; 360W (24V)

额定充电电流 Rated charging current

5A、10A、15A、20A

#### 电性能参数 Electrical Parameters

静态功耗 Static Power Consumption

≅ 15mA

输出最大电流 Output Max. current

10A

温度补偿 Temperature Compensation

-30mV /°C/12V (25°C ref)

工作环境温度 Ambient temperature

-35°C to +55°C

湿度范围 Humidity range

10% - 90% (NC)

工作海拔高度 Altitude

≅ 5000 meter

防护等级

IP30