

Overview

LandStar BPL series combines solar charge controller and LED constant current driver into one unit which is ideal for solar LED Lighting, especially when dimmer function is needed. The control parameter can be programmed via Mobile APP, PC Monitor setting software with RS485 communication interface.

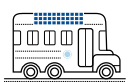


Features

- Apply to lead-acid battery and lithium battery
- 12/24VDC automatically identifying system voltage or user-defined working voltage
- 3-Stage intelligent PWM charging: Bulk, Boost/Equalize, Float
- Battery temperature compensation function
- Digital precision constant current control and the control accuracy are less than 30mA
- Maximum output efficiency of 96.7%
- The output current can be adjusted among the rated power and current range
- Intelligent power mode with 365-day lighting control technology
- Load test function for detecting the system
- Multiple load control modes
- Extensive Electronic protection
- Monitoring and setting parameter via Mobile APP, PC Monitor setting software with RS485 communication interface
- Use of standard Modbus communication protocol for RS485 bus connections, communication protocol compatibility much better
- Connecting the IOT(Internet of Things) module and Cloud Server monitoring software to realize remote monitoring of the multi-machine system
- The RS485 connector can provide power supply
- Aluminum housing for better cooling
- IP67 waterproof degree

Electronic protections

- PV Short Circuit
- PV Reverse Polarity
- Battery Reverse Polarity
- Battery Over Voltage
- Battery Over Discharge
- Battery Overheating
- Libattery low temperature
- Load Short Circuit
- Controller Overheating
- High Voltage Transients



Solar Car



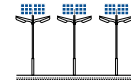
Solar Home



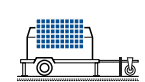
Solar Backpack



Solar Boat



Solar Street Light



Solar Power Generator

Technical Specifications

Model		LS102460BPL	LS2024100BPL
Nominal system voltage		12/24VDC Auto	
Battery input voltage range		9 ~ 32V	
Max. PV open circuit voltage		50V	
Rated charge current		10A	20A
Max. output current		2.0A	3.3A
Max. output power		30W/12V;60W/24V	50W/12V;100W/24V
Output voltage range		Max. battery voltage+2V ~ 60V	
Load open circuit voltage		60V	
Max. output efficiency		96.7%	
Output current control accuracy		≤30mA	
Battery Type		Lead-acid battery: Sealed(default)/Gel/Flooded/User Lithium battery ★:LiFePO4/Li-NiCoMn/User	
Lead-acid battery	Equalization Voltage▼	Sealed:14.6V; Flooded:14.8V;User:9-17V	
	Boost Voltage▼	Sealed:14.4V;Gel:14.2V; Flooded:14.6V;User:9-17V	
	Float Voltage▼	Sealed/Gel/Flooded:13.8V;User: 9-17V	
	Low Voltage Reconnect Voltage▼	Sealed/Gel/Flooded:12.6V;User: 9-17V	
	Low Voltage Disconnect Voltage▼	Sealed/Gel/Flooded:11.1V;User: 9-17V	
Lithium battery	Boost Voltage▼	LiFePO4(4s):14.5V/Li-NiCoMn(3s):12.5V/User:9-17V	
	Low Voltage Reconnect Voltage▼	LiFePO4(4s):12.8V/Li-NiCoMn(3s):10.5V/User:9-17V	
	Low Voltage Disconnect Voltage▼	LiFePO4(4s):11.1V/Li-NiCoMn(3s):9.3V/User:9-17V	

Self-consumption	≤11mA/12V;≤9mA/24V	
Charge Circuit Voltage Drop	≤0.3V	
Temperature compensation coefficient	-3mV/°C/2V	
Working environment temperature	-35°C ~ +55°C	
Enclosure	IP67	
Grounding	Common Positive	
Overall dimension	107x73x20mm	108.5x102x25.6mm
Mounting dimension	100mm	100.5x80mm
Mounting hole size mm	Φ4	Φ5
Power cable AWG/mm ²	PV/BAT: 14AWG(2.5mm ²) LOAD: 18AWG(1.0mm ²)	PV/BAT: 12AWG(4.0mm ²) LOAD: 18AWG(1.0mm ²)
Net weight	0.28kg	0.46kg

★ When the battery type is lithium battery, the controller doesn't support self-activation.

▼ Battery Voltage Control Parameters (below parameters are in 12V system at 25 °C, please double the values in 24V system)