

# Solar Charge Controller with built in LED Driver

## LandStar LPLI Series



The LandStar LPLI series controller combines the solar charge controller and LED constant current driver into one unit which is ideal for solar LED Lighting, especially for the application for LED lamp which requires dimmer function. The advanced pulse width modulation charging methods enables the system charging and discharging management to obtain the most radical optimization. Make the system cost reduce, and increase the system flexibility. The features are listed below:



### Application:

- LS101240LPLI 10A 12VDC
- LS101260LPLI 10A 12VDC
- LS102460LPLI 10A 12/24VDC ◆
- LS2024100LPLI LS2024120LPLI 20A 12/24VDC ◆

### Features:

- Apply to lead-acid battery and lithium battery
- Lithium battery self-activating function
- Lithium battery low temperature protection function
- Intelligent power mode with 365-day lighting control technology
- Load reduce power automatically
- Load power limitation function
- Maximum output efficiency of 96%

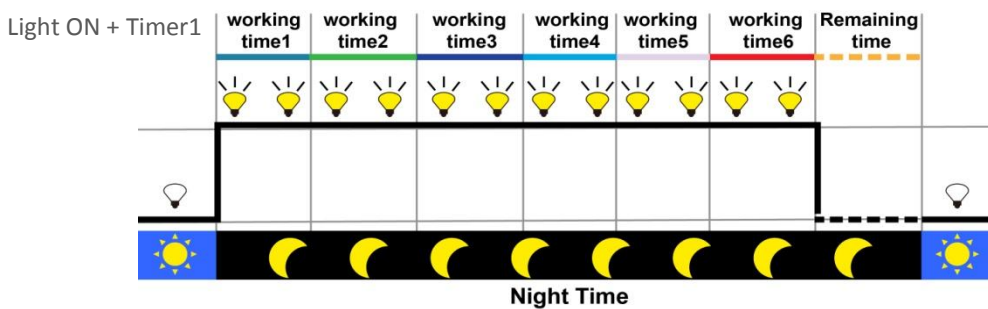
- Digital precision constant current control and the control accuracy are less than  $\pm 2\%$
- Discharging power calculation and real-time energy statistics recording function
- Multiple load control modes, LED rated current and current percentage can be set
- Load test function for detecting the system
- Extensive electronic protections
- Without any button, parameter setting via RC-10 and FC-01 with IR function.
- Fully encapsulated PCB, IP68 protection
- Aluminum housing for better cooling

### Electronic protections:

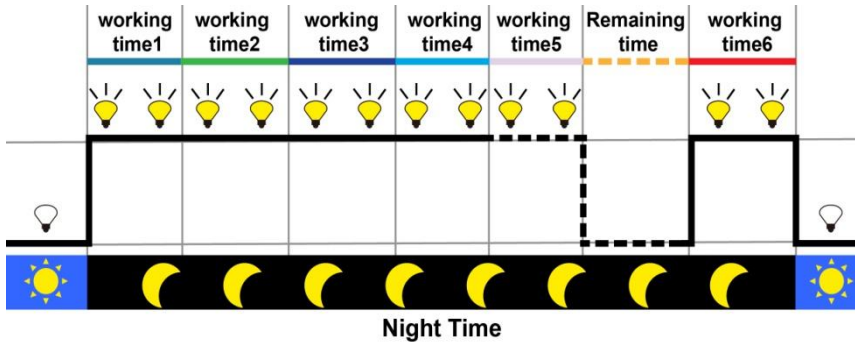
- PV Reverse Polarity
- Battery Over Discharge
- Load Short Circuit
- Battery Reverse Polarity
- Battery Overheating
- Load Open Circuit
- Battery Over Voltage
- Libattery Low Temperature★
- Load over voltage)

### Load Working Mode:

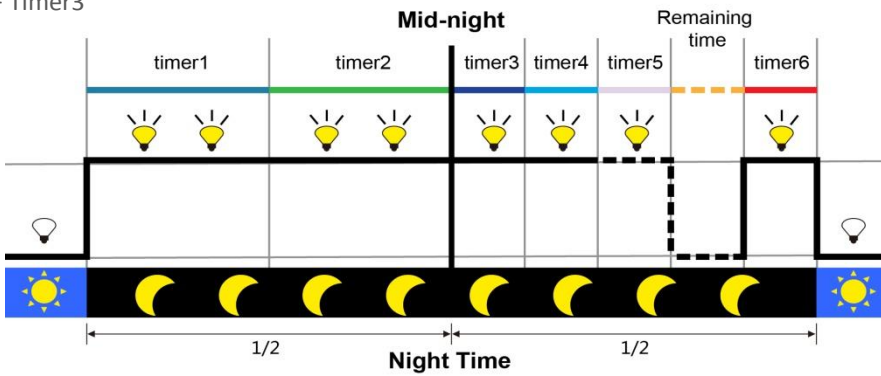
- [Manual](#) Mode
- Light ON/OFF(default))
- Light ON + Timer
- Time Control
- Intelligent Power Mode



Light ON + Timer2



Light ON + Timer3



### Load Working Mode:



There are two methods that it can realize controller work mode and parameters through IR function:

- 1) IR Remote Controller—RC-10
  - 2) Super Parameter Programmer—FC-01
- This method can realize one-key setting operation which is suitable for bulk quantity products setting or applied in the projects.

**NOTE: Please refer to the user manual of handheld device.**

## Technical Specificat

Item	L101240SLPLI	LS101260LPI	LS102460LPLI	LS2024100LPLI LS2024120LPLI
Nominal system voltage	12VDC		12/24VDC ◆	
Rated charge current	10A			20A
Rated charge current	30V		50V	
Battery input voltage range	9V~16V		9V~32V	
Max. output power	40W	60W	30W/12V 60W/24V	50W/12V; 100W/24V (LS2024100LPLI) 60W/12V; 120W/24V (LS2024120LPLI)
Max. output Current	2.6A	4.0A	2.0A	3. 3A (LS2024100LPLI) 4. 0A (LS2024120LPLI)
Output voltage range	(Max. Battery Voltage +2V)~60V			
Load open circuit voltage	60V			
Maximum output efficiency	96%			
Out current control accuracy	≤2%			
Battery Type★	<b>Lead-acid battery:</b> Sealed(default)/Gel/Flooded/User <b>Lithium battery:</b> LiFePO4/Li-NiCoMn/User			
Lead-acid battery	Equalization Voltage ▼	Sealed:14.6V; Flooded:14.8V; User:9-17V		
	Boost Voltage ▼	G Sealed:14.4V; el: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):14.6V/Li-NiCoMn(3s):12.6V/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	≤18mA(12V); ≤23mA(24V)			
Charge Circuit Voltage Drop	≤0.14V			
Working environment temperature	-40℃~+55℃			
Enclosure	IP68(1.5m,72h)			
Overall dimension(mm)	87x58x22.8	107x68x20		08.5x88x25.6
Mounting dimension(mm)	80mm	100mm		100.5mm
Power cable	PV/BAT: 14AWG(2.5mm <sup>2</sup> ) LOA		V/BAT:12AWG/4mm <sup>2</sup> LOAD:18AWG/1mm <sup>2</sup>	
Net weight	0.18kg	0.21kg		0.40kg

◆ The controller is not recognize system voltage and no temperature compensation when the battery connect the lithium battery.

★ DO NOT connect the PV array when change the lithium battery type via the phone APP or PC software.

▼ The parameters are 12V system at 25 °C, please double the values in 24V system.



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