1.Function

- One programmable nightlight function;
- PWM regulation (series type);
- Integrated temperature compensation;
- Three-state charging method;
- SOC and voltage controlled LVD;
- Solid-state circuit and load protection;
- Reverse polarity protection;
- Fully electronically protected;

The SMLNL series is a sophisticated solar charge controller family for low cost applications. The electronic circuit is equipped with a microcontroller that provides high-efficiency charging technology together with a number of outstanding status display, warning and safety functions.

The SMLNL series comes with two night light function mode. One of them is programmable that switch on the load output for a adjustable number of hours from dusk.

The nightlight function is overridden by a battery deep discharge protection to avoid excessive discharge and damage of the battery.The temperature-compensated three-state PWM charging method (boost-equalize-float) is now adjustable to sealed and vented lead-acid batteries.The low voltage disconnect function can be controlled either by SOC or by voltage.The battery status, charging status and load status are clearly indicated by 5 LEDs.

2.Technical Data

Model	SMLNL05	SMLNL08	SMLNL10	SMLNL15	SMLNL20
Nominal voltage	12/24V Automatic Recognition				
50℃ Max. solar panel current	5A	8A	10A	15A	20A
50℃ Max. load panel current	5A	8A	10A	15A	20A
25℃ Boost voltage	14.5V/29.0V				
25℃ Equalization voltage	14.8V/29.6V				
25℃ Float voltage	13.7V/27.4V				
Deep discharge protection	11.4–11.9V/22.8–23.8V Controlled by statc of charge 11.0V/22.0V Controlled by voltage				
Load reconnect voltage	12.8V/25.6V				
Temperature compensation	$-4mV/cell \times K$				
Self consumption	<4mA				
Max. wire size	16mm²(AWG#6)				
Dimensions(W × H × D)	80 × 100 × 32mm(w × h × d)				
Weight	183g				
Temperature range	−20℃ ~+50℃				
Type of protection	IP22				