Solar Charge Controller
with Build-in LED driver
USER MANUAL
STC-LED-V2.0 Series

Thank you very much for buying our product , Please read thoroughly before using the prouuct

Description of Functions

1. The charge controller adjusts itself automatically to 12V or 24V system voltage

2. LED Power：12V system:Max.30W, 24V system：Max.60W

3. Build-in LED driver, Efficiency>95%

4. 4 periods work mode. Any adjustable power can be 10-90%.

5. Digital display, simple operation

6. Infrared remote control

7. Low voltage disconnect regulated by state of charge or voltage.

8. Complete electronic protection,it protects the battery from being overcharge by the solar array and from
   being deep discharged by the loads. It can antomatic adaptation to the ambient temperature.

9. PCB board using moistureproof processing.

Attentions

The charge regulator is intended for use in photovoltaic systems with 12V or 24V nominal voltages, It shall be used

with vented or sealed (VRLA) lead acid batteries only.

Safety Recommendations:

1.Batteries store a large amount of energy. Never short circuit a battery under all circumstances. We recommend
to connect a fuse(30A) between battery and controller.

2.Batteries can produce flammable gases. Avoid making sparks, using fire or any naked flame. Make sure that the battery
room is ventilated.

3.Avoid touching or short circuiting wires or terminals. Be aware that the voltages on specific terminals or wires can
be up to double the battery voltage. Use isolated tools. Stand on dry ground and keep your hands dry.
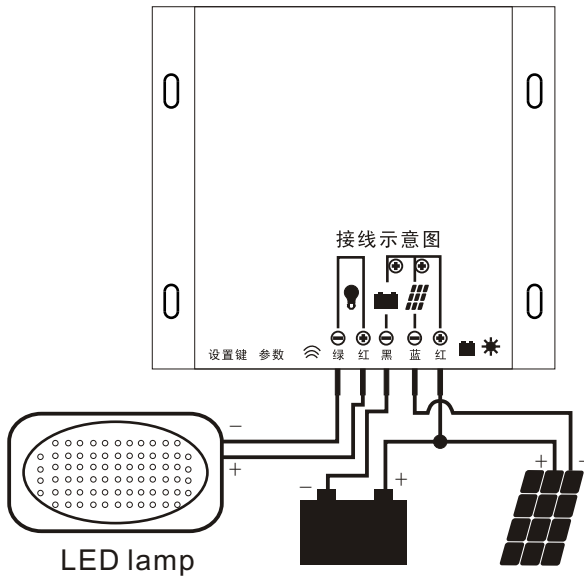
Installation
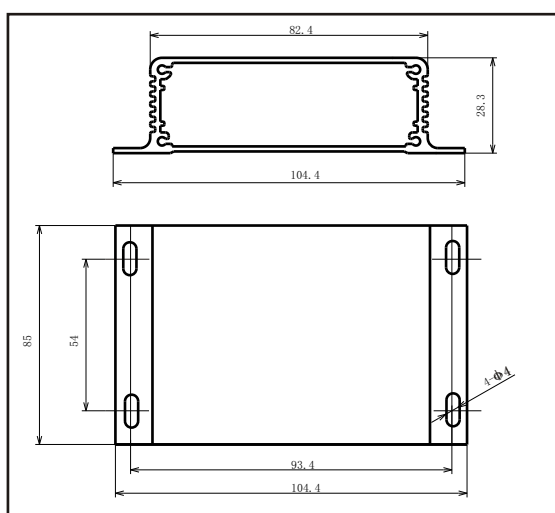
Note：

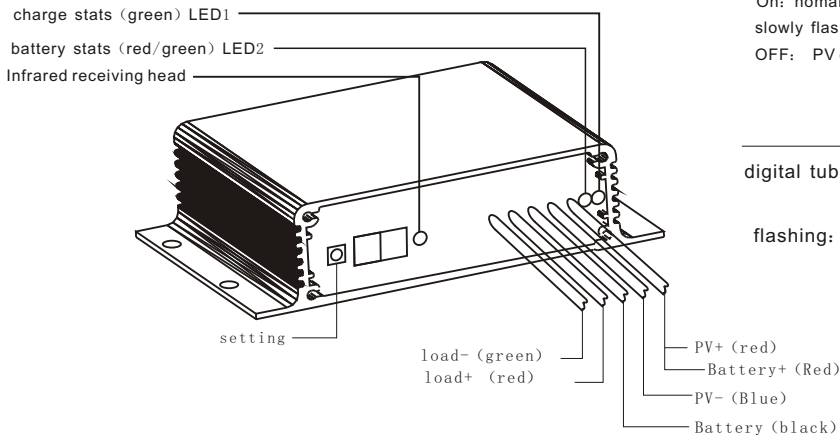1. Screws specifications M3 × 10 (since the attack)

2. Make sure that heat-location around other objects
   were not blocke

（安装尺寸）

Connecting

接线示意图

设置键 参数 🔔 绿 红 黑 蓝 红 🔋 ☀

LED lamp

1. Connect sequence: battery --solar array --loads

2. Wier size: min4.0mm

3. Grounding the solar system: Be aware that the positive terminals of the SLDcontroller are connected internally and therefore have the same electrical potential. if any grounding is required ,always do this on the positive wires.

Display functiong in normal operation

charge stats（green）LED1

battery stats（red/green）LED2

Infrared receiving head

setting

load-（green）
load+（red）

PV+（red）
Battery+ (Red)
PV-（Blue）
Battery (black)

LED1(green）stats

On：nomal voltage
slowly flashing：charging
OFF： PV does not supply electricity

digital tube stats

flashing： data reception success

LED2(red/green）battery stats

ON: normal
Slowly flashing：full
fast flashing: over voltage
orange： under voltage
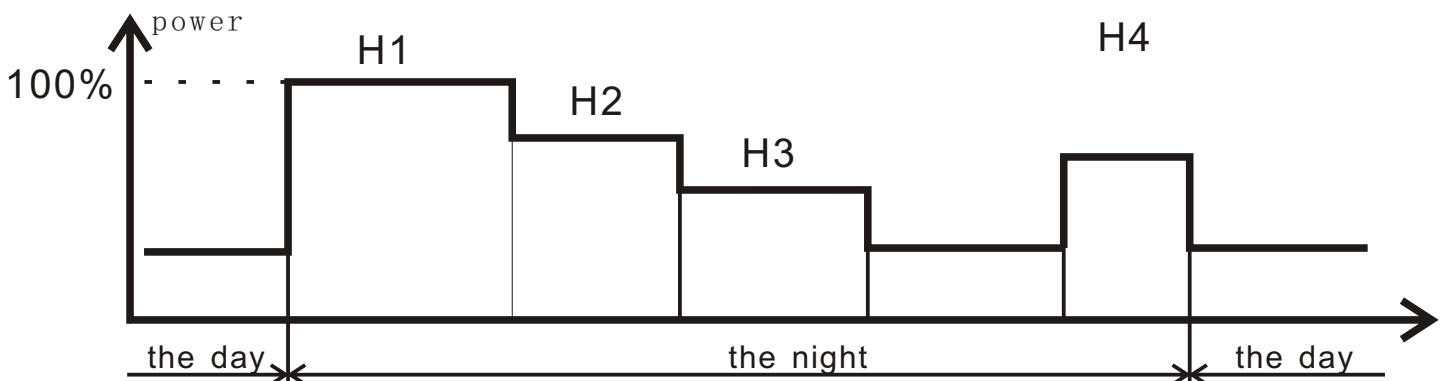Red over discharged
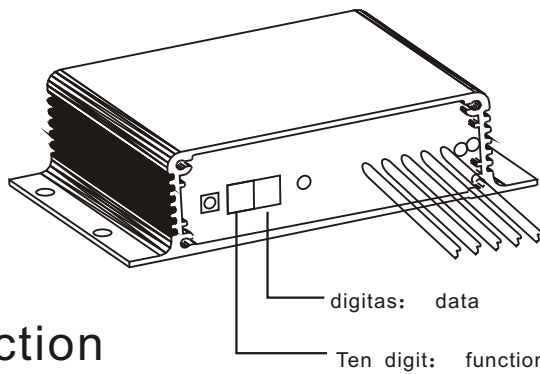
Setting swich+LED

setting load work mode
see"setting"
working parameters can also
be set with a remote control

Work mode

<一> work mode,（4 periods work mode）

power

100%

H1

H2

H3

H4

the day

the night

the day

digitas：data

Ten digit：function

Function

Digital Display		Function （Ten digit）	Function parameters (digits)	The formula （digits）
Ten digit	digits			
0	0-3	load work mode	0: pure light control 1: light+time control 2: continuation output 3: test mode	—
1	0-4.	The first period time(H1)	0-14H	×1H
1.	0-0.	The first period power	0-100% , increase by 10%	×10%
2	0-4.	The second period time(H2)	0-14H	×1H
2.	0-0.	The second period power	0-100% , increase by 10%	×10%
3	0-4.	The third period time(H3)	0-14H	×1H
3.	0-0.	The third period power	0-100% , increase by 10%	×10%
4	0-4.	The four period time(H4)	0-14H	×1H
4.	0-0.	The four period power	0-100% , increase by 10%	×10%
5	1-0.	The number of LED in parallel	1-10 parallel	—
6	0-9.	load current	200-390mA,increase by 10%10mA	200+ digit×10 mA
7	1-1.	Light ON/OFF threshold voltage	1-11V , (×2/24V)	×1V
8	0-4.	LVD	10.6-12V(precision 0.1V).(×2/24V)	10.6+ digit×0.1V
9	0-9	Turn on the lights delay time	0-27minute	×3, minute

NOTE：

1. Radix point of LED segment display indicate the value added"10", for example 4.=14
2. Test mode is as same as light control mode but no delay, therefore, test mode is only used to test load switch. select the other one to exit the test load mode manually.

Settings

Press the Settings button, the digital tube on, Short press → cycle display the current setup parameters, Choose the functionality you need to set long press → Digital digits flashes, Short press → choose the function you need. wait for tree seconds → the digital tube no flashes when successfully set

The same method to set the next parameter

LED lamp arrangement method

System voltage	LED parallel number(K)	LED series number(N)	LED Power range(P)
12V	1≤K≤5	5≤N≤14	P≤30W
24V	1≤K≤5	9≤N≤14	P≤60W

The reference of LED for error code is shown in the table

E1 -battery over discharge and voltage is lower over discharge point

E2 -battery over discharge and voltage is lower over discharge point without getting to back point

E3 -load over load

E4 -load short circuit

E5 -open load

".". The radix point of LED1 lighting up indicates that load is open. oppositely,load is closed

parameter

model	STC10-LED-V2.0
rated charge current	10A
system voltage	12V/24V Automatic detection
Max.pv power	12Vsystem: 170W 24V system: 340W
Max. load power	12V system: Max.30W. 24V system: Max.60W
Rated load current	2A
Max.LED series:	12V system: 14 series. 24V system: 14series.
over load,short current protect	yes
no-load current	≤6 mA
over-voltage protection	16V(12V), 32V/24V;
work temperature:	-35℃至+60℃
boost voltage	14.4V(12V), 28.8/(24V)
Equalization voltage	14.6V(12V), 29.2V/(24V)
Float voltage	13.8V(12V), 27.6V/(24V)
recharge voltage	13.2V(12V); 26.4/(24V);
Temperature compensation	-5mv/℃/2V
low-voltage warning	12V(12V); 24V/(24V)
Low-voltage disconnect	11V(12V); 22/24V; (可设置)
load reconnect voltage	12.6V (12V), 25.2/ (24V)
over-heat protection	70℃
dimension	104*28*85mm
weight	400g
IP	Ip68
remote controller	Infrared remote controller (optional)