

Solar LED street light



New life start from here.....

SYSTEM INTRODUCTION

Company: ANEMAKONON. LTD LIMITED

Mr. Enrique, Devesa Coria.

Mobil: 131 1374 2791

& Mobil: +34-653054560

Skype: enrique_devesa

E-mail: enrique_devesa@yahoo.es

Miss Sabrina :

Tel: +86-159 1439 8825

Tel: +86-757 8655 0842

Web: www.anemakono.com

E-mail: sabrinachen2005@hotmail.com

E-mail: sabrina@anemakono.com

Address of the Factory: Xiawei Industrial Area, Jiaoyu Road, Jiujiang Town, Nanhai, Foshan City, Guangdong Province, China

Address of Administration: Unit 109, 1/F., Mirror Tower, 61 Mody Road, T.S.T. East, GPO Box 3201 Hong Kong

1 comparison between traditional street light and solar street light

1) City lighting engineer is complicated: in the city lighting engineer, first cablecasting ,in this process, it need to dig the cable trench, laying drainage and so on so many big engineer project, and then it need to be adjusted for a long time. If there is any problem in a wire only, it need to be returned to work mostly, the cost of the traditional street light is so expensive. However , if choose the solar street light , it is very easy to use. When it carry on its engineer, it no need cablecasting, it only need a cement, and use the stainless steel screw to secure itself.

2) the electric bill of the traditional city lighting is very expensive: the traditional city lighting cost too much , and it need maintenance for the wire and other equipments, the cost of the maintenance increases each year. The solar street light is free of electric cost, and the investment is needed at the beginning , no need maintenance. Three year can take back the engineer cost , benefit all the time.

3) the traditional city lighting has the potential safety hazard. The quality of the engineer, the material decline, power supply unstable, water tube and the electric tube conflicts has the potential safety hazard. The solar street light has no potential safety hazard, it is operating under the low-voltage conditions, safety, and reliability . The advantages of the solar power lighting, it is Environment-friendly, and beautify the District environment, it has no potential safety hazard., saving energy, it is widely used in the sale of the housing, government project.

2 , comparison between the traditional high voltage sodium light and the Solar street light engineer project

1) 10 kilometers road, the comparison between the traditional light project and solar street light project: (666 pcs of the road lamp) (15900 RMB for one pcs solar street light)

CONTENT		Traditional high voltage sodium light (250W)	solar street light (84WLED ce, 250W solar panel)
At the begin ning	①10m pole	$666 \times 1380 \text{RMB} = 919080 \text{ (RMB)}$	$666 \times 15900 = 10589400 \text{ (RMB)}$
	② lampshade assembly (including the light)	$666 \times 550 \text{RMB} = 366300 \text{ (RMB)}$	
	③ wire (international VV22-1KV-4×50)	$20000\text{m} \times 178 \text{RMB/m} = 3560000 \text{ (RMB)}$	
	④ transformer 8pcs model : S11-10KV/400V/100KVA)	$8\text{pcs} \times 260000 \text{RMB/pcs} = 2080000 \text{ (RMB)}$	
	⑤controlled box assembly 8pcs	$8\text{pcs} \times 38000 \text{RMB} = 304000 \text{ (RMB)}$	
	⑥street light system cost	$(①+②) \times 5\% = 64269 \text{ (RMB)}$	
total investment		$①+②+③+④+⑤+⑥ = 7293649 \text{ (RMB)}$	
material cost (stone cement, sand, labor force)		$666 \times 550 \text{RMB} = 366300 \text{ (RMB)}$	
Electricity cost each year (12 hour s working day)		$250 \times 12 \times 666 \times 0.8 = 1598.4 + (1598.4 \times 5\% \text{ loss}) = 1678.32 \times 365 = 612587 \text{ (RMB)}$	
maintenance fee for the street light each year		$420 \times 666 = 279720 \text{ (RMB)}$	
Total cost for the first year		8552256 (RMB)	10589400 (RMB)

Anemakono.Ltd.Limited

When we can take back the part of the investment for the solar street light which is over more than the investment of the traditional light	$10589400 - (7293649 + 366300) = 2929451$ (RMB)	$2929451 \div (612587 + 279720) = 3.2$ (years)
---	--	--

Remarks: the maintenance of the traditional light will be three times higher than the solar street light 3years later

2) 20 kilometers, the comparison between the traditional light project and solar street light project: (952pcs of the road lamp) (15900 RMB for one pcs solar street light)

	Content	Traditional high voltage sodium light (250W)	Solar street light (84WLED price, 250W solar panel)
At the beginning	①12m pole,42m distance .	$952 \times 1780\text{RMB} = 248214\text{USD}$	$952 \times 15900\text{RMB} = 2217196\text{USD}$
	② lampshade assembly (including the light)	$952 \times 550\text{RMB} = 76695\text{USD}$	
	③wire (international VV22-1KV-4 ×50)	$44000\text{m} \times 178\text{RMB}/\text{M} = 1147209\text{USD}$	
	④ transformer 18pcs model: S11-10KV/400V/100KVA)	$18 \text{个} \times 260000\text{RMB}/\text{PCS} = 685513\text{USD}$	
	⑤controlled box assembly 18pcs	$18 \text{个} \times 38000\text{RMB} = 100190\text{USD}$	
	⑥street light system cost	$(\text{①} + \text{②}) \times 5\% = 16245\text{USD}$	
	total investment	$\text{①} + \text{②} + \text{③} + \text{④} + \text{⑤} + \text{⑥} = 2274068\text{USD}$	
	material cost (stone cement, sand, labor force)	$952 \times 550\text{RMB} = 76695\text{USD}$	
	Electricity cost each year (12 hours working day)	$400 \times 12 \times 952 \times 0.8 = 3655.68 + (3655.68 \times 5\% \text{loss}) = 3838.464 \times 365 = 205220\text{USD}$	
	maintenance fee for the street light each year	$420 \times 952 = 58567\text{USD}$	
	Total cost for the first year	2614552USD	2217196USD
	When we can take back the part of the investment for the solar street light which is over more than the investment of the traditional light	$17849547 - 15136800 = -397355\text{USD}$	NO NEED TIME !

From this project, we can know that the bigger the project is , saving more and more money!

If the project is bigger enough, we can just use the solar street lamp only!

what decide the price of solar street light mostly?

- | | |
|---------------|-------------------|
| 1 lamp pole | 5 controller |
| 2 lamp base | 6 solar panel |
| 3 battery | 7 wire |
| 4 battery box | 8 processing cost |

the 8 parts of the lamp system decide the price mostly.

4 How can we offer you the precise price for the solar street light?

we need to know some conditions of the usage as below:

- 1 the sunshine condition
 - 2 the road width
 - 3 how long do you want to be lighting at night
 - 4 how many days do you want the lamp to be working in the rainy days.
 - 5 the wattage of the lamp base you want?
- Until we have these details , we can offer you the suitable road lamp system.

5 our solar street light control system introduction?



as you know , for the solar street light , the controller is very important , the controller can decide the life time of the battery, the solar panel, and the lamp base , besides , good controller can make the solar power supply more stable, and efficiency.

our solar controller can draw power from the grid by connecting the SMPS in series.

we have two kinds of the controller, one is for the wind-sun complementary solar road lamp, and the other is for the solar street light.

the controller characteristic and electrical parameter:

- 1 output waveform: sine wave output only (distortion rate<2%)
- 2 output frequency: 50/60Hz

Anemakono.Ltd.Limited

3 output efficiency : about 90%, auto chilling fan.

4 EMI : FCC class B .

5 circuit protection: over voltage/Under-voltage protection, short circuit/over load protection, overtemperature protection.

How to work:

1. when the input voltage reach 24V/12V,and then battery's voltage reach 28V/14.5V, the controller will stop charging .

2. when the voltage of the battery drop to 11.5V (input voltage 12V) or 22.5V(input voltage 24V), the controller will start to charge the electrical power to the battery from the grid.

3. time control function, you can setup the time for electricity charge or discharge.

4 the controller can repair the battery by EMP Charging .

5 you can setup a value to charge by the floating charge function.

6 solar controller Main technical parameters

6. 1 solar controller main technical parameters:

model	SFG SC400w	
(V)DC voltage	48	
(A)load circuit	100	
Max PV module power KW _{PI}	5	
Solar battery	6 pcs	
Circuit value /each circuit of the solar battery	20	
Relay output touch-point capacitance	1A 125AC or 2A 30VDC	
Controller max self-consuming electricity (A)	0.5	
voltage drop	Between the solar panel and the Lead acid battery	1.2V
	Between the .Lead acid battery and load	0.1V

Anemakono.Ltd.Limited

Protection function	<p>anti-charge protection at night ,battery over-charge protection, over-discharge alarm protection.</p> <p>Battery open circuit protection, load over-voltage protection, output over-load protection, output short-current protection, solar panel reverse voltage protection</p>
---------------------	---

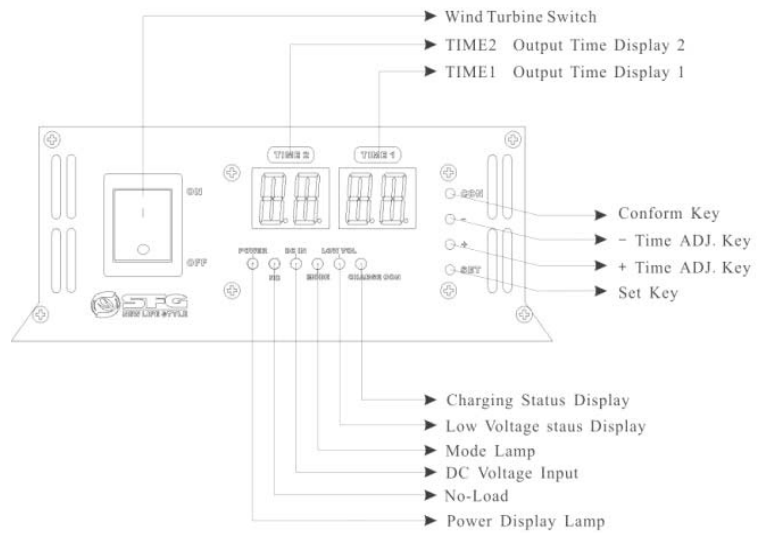
6. 2 Inverter equipment main technical parameters

VDC Output	48VDC
DC voltage allowance range	43. 2VDC~70VDC
output rated capacity	7. 2kVA
output power rating	3kW
output voltage rating	220VAC ± 3%
Output rate current	22. 7A
Output frequency	50-60HZ
Wave distortion rate	≤ 3% (liner load)
Inverting efficiency	≥ 90%
VAC Insulation strength	1500 (input and output)
dBA	≤ 50 dB
ambient temperature	-10°C+50°C
temperature	0~90%,
usage altitude(m)	≤ 6000

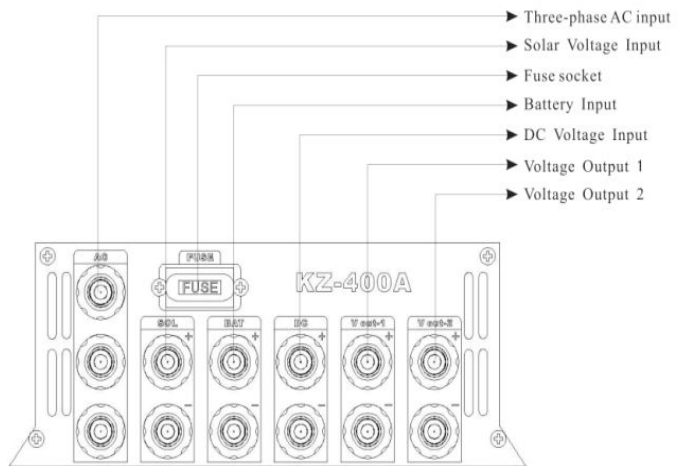
6.3 Solar controller operation

Solar controller adopt 9 key keyboard and 128*64 LCD for the Man-Machine Interface
Three grade menu structure.

- 1 First grade menu
 - operating mode
 - parameters setting
 - Case record
 - real-time clock
- 2 Second grade menu
 - operating mode
 - lead-acid battery
 - PV circuit
 - load circuit
 - charging circuit
 - lead-acid battery temperature
 - PV module total installed capacity AH
 - Load power consumption AH
 - lead-acid battery eletricity capacity AH



- The PV current of The No.I PV module connected only
- parameters setting
- resetting the parameters codes
- codes resetting
- DC voltage level
- charging mode
- over-charing limit high voltage
- over-charing connected voltage
- over-discharging limit low voltage
- over-discharging connected voltage
- the first circuit charging voltage.
- the second circuit charging voltage.
- the third circuit charging voltage.
- the fourth circuit charging voltage.
- the fifth circuit charging voltage.
- the sixth circuit charging voltage.
- charging hysteresis loop percentage
- over-load protection circuit
- temperature compensation
- short-current times decrement value
- recovery the manufacturing value



special parameters setting
Case record
load short current*times
current over load *times
lead-acid battery over-charging* times
lead-acid battery over-discharging* times
real-time clock
hour**minute**second
saturday
time reseting

6.4 Major menu introducion:

Charging current: The difference value of the PV current value and load current value. + means charging power, - means discharging power.

Rewriting parameters codes: user can resetting the controller parameters, but it must input the Rewriting parameters codes, the original code is 111111.

Code resetting: user can set their own code

DC voltage level: indicating the system voltage level, such as 12V,24V,36V,48V,110V,220V so on. These parameters cannot be resetting by the users.

Charging mode: concluding the normal charging-discharging mode, photo-control mode, photo-time control mode, time-control mode. User can select one of them. The original mode is normal charging-discharging mode; the other three mode are used in special conditions for street lights,if not, using the normal charging-discharging mode. Only the user requir to use the other three modes for the road lamp, otherwise the three modes will be hidden .

- 1 the normal charging-discharging mode:when the lead-acid battery voltage > the circuit No.I (i=123456),the No.I circuit shut down, if not it passes.
- 2 photo-control mode: on the basic of normal charging-discharging mode, when the illuminance of the photosensor goes down enough, the load connected, when it goes up enough, the load closed.
- 3 photo-time control mode: when the illuminance of the photosensor goes down enough, the load connected,when the system reaches the setting time,the load closed.
- 4 time-control mode: when the system reaches setting closed tiem, the load closed; when it reaches the connected time, the load operating.
- 5 over-charing limit high voltage: in the automatic mode, when the value of battery voltage is bigger than the over-charing limit high voltage's,the six circuit all shut down, meanwhile ,the load shut down.
- 6 over-charing connected voltage: when it is over-charging, the battery voltage is lower than this value, the six circuit all connected automatic; meanwhile ,the load operating.
- 7 over-discharging limit low voltage: when the battery voltage's value is lower than the over-discharging limit low voltage, the load closed down.
- 8 over-discharging connected voltage: when it is over-discharging, the battery voltage's value is bigger than the over-discharging connected voltage's, the load operating.
- 9 Charging Hysteresis percentage: in order to avoid the six circuit output has oscillations around the transition location, setting a voltage hysteresis range around the transition location.
- 10 Over-load protection current:when the load current value is bigger than Over-load protection current's, the load closed down.
- 11 temperature compensation coefficient: it varies directly with the DC voltage level of 2V/per, when the temperature goes up a degree, the tansmission voltage drop to suitable value.

Anemakono.Ltd.Limited

12 short-current times decrement value: when the times of the load short-current reach the value, the system will be locked up, the LCD will warn the user to remove the short-current malfunction, and then press the reset button restart the system again.

13 recovery the manufacturing value: the value set by the user recovered as the manufacturing value by the factory.

14 special parameters setting: using for closing the lesser load and setting the voltage parameters when under the condition of operating . The special parameters setting has two submenu: senior circuit value, re-connected value. The relay output contact controls the lesser load output single, user can add a intermediate relay in series to control the load. The usage of the intermediate relay output contact is up to the user.

15 senior circuit value: when the battery voltage value is lower than the senior circuit value, the lesser load shut down..

16 re-connected value: when the battery voltage value is bigger than the re-connected value, the load connected.

6.5 Button introduction.

9 button function as below:

MENU:

↑:move up or data plus 1

↓:go down or data minus 1

←:move left for 1 position

→:move right for 1 position

BACK:

ENTER:

BL: background lighting for 10 seconds

ERSET

In the first level menu, when pressing the ↑or↓,the cursor move up or down for 1 position; when pressing the ENTER button,go inside the second menu as the cursor pointin.

In the second level menu, when pressing the ↑or↓,the cursor move up or down for 1 position pointing to the menu ; when pressing the ENTER botton, go inside the third level menu;

In the “working state”second level menu, there are working state 1 ,working state2,working state3 , working state4 ,four menu, they are battery voltage,PV current,load current,charging current, and battery temperature, PV power capacityAH accumulation,load power consumptionAH accumulation.battery power capacity AH accumulation and the PV current of the No.I PV battery connected only. When press the ENTER button,being on the working state1, press again the ENTER button or ↑or↓or←or→,it will be on the working state2 working state3 working state4, changing the state1 between state4. If pressing the MENU or BACK button,it will go back to the first menu. When setting the parameters, user must input the correct code, and then can resetting the parameters, if not user only can go through the parameters without resetting the parameters. The code only works when it go into the second level menu. Once it go back to the first level menu and go into the second menu again, it must input the code again in order to resetting the parameters.

When setting the parameters of the third level menu,the datas which can be resetting are showing lighting, when pressing ↑or↓buttons,the data will plus 1 or minus 1;when pressing ←or →buttons, the lighting positions go left or right for 1 position;when pressing the ENTER button, the parameters will be stored and go back to the second level menu; if not press the ENTER button but press the MENU or BACK button, the resetting parameters will go out and return to the first level menu or forward menu.

Pressing the BL button at anytime, background lighting for 10 seconds; Pressing the RESET button at anytime, the system reset.

Multifunction alarm introduction:

Four multifunctions will be shown as below:

- (1) battery over discharge or not recover to its normal value after over discharge.
- (2) battery voltage beyond its capacity or battery circuit shut down.
- (3) load current over load protection.
- (4) load short-current.

At the same time,the buzzer alarm,when press any button, the buzzer stop alarming. If the multfunction still exist,it can be check through the third level menu by the case record.

6.6 Installation and usage

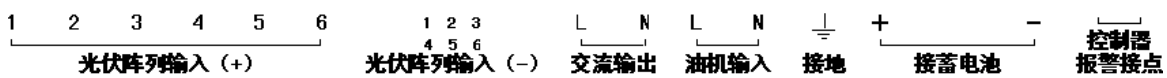
1 make sure that very switch is on the off position.

2 open the cover board, connecting 6 path solar battery”+” to the “PV module input(+)” 1-6 ports, the solar solar panel “-” connected to the “PV module(-)”.

3、 Using the copper wire connected the batteries (+)to the connected battery(+)port, the cathode connected to the connected battery (-)

4、 connecting the AC load to the AC output port.

5 the ground port must connected to the ground (the earthing resistance<10Ω) the ground wire should be thick thread, the ground contact should be closed to the controller, the ground wire should shorter as possible.



PV module input + PV module input - ACoutput oil engine input battery port controller alarm contact

接线端子标识

6 Open the box, making the knife switch at the “inverter” position, put on the “inverter source DC input” HAGER.

7 Making the black boat switch on the off position, using the multimeter to check if the AC output normal or not.

8 Put on the PV input1 to the PV input6, checking the solar indicator and the DC output voltage normal or not, if normal, put on the “AC output breaker” and then it can be used correctly.



9、 If the load use the oil engine to generate the power, please shut off the “AC out put” HAGER, and then put the knife switch on the “oil engine” position.

6.7 Remarks :

1 solar controller manufacturing parameters as below (the parameters just for reference)

List 2

parameters	Original setting
battery over discharge voltage	43.2V
the battery reconnected load voltage after over discharge.	49.6V
battery beyond its voltage’s protection value	70V

Anemakono.Ltd.Limited

reconnected load voltage after battery beyond its voltage	60V
No.1solar panel over charge voltage	53V
No.2solar panel over charge voltage	54V
No.3solar panel over charge voltage	55V
No.4solar panel over charge voltage	56V
No.5solar panel over charge voltage	57V
No.6solar panel over charge voltage	58V
charging hysteresis percentage	2.5 %
over-load protection current operating value	120
charging control circuit selection	6 (circuit)
temperature compensation coefficient	2mV/°C

Remarks :

- 1 temperature compensation coefficient adjustment range is 0~5mV, if have no temperature sensor, it must set the temperature compensation coefficient as 0.
- 2 prohibit shut down the battery when the PV module breaker is operating.
- 3、 for the repair, please shut down the solar panel first, and then shut down the load, switch off the battery at last, prohibit switch off the battery before switch off the solar panel.
- 4、 manufacturer parameters setting value only for reference, each kind of the battery over charge or over discharge is different , please refer to the battery supplier.
- 5、 The controller can has 6 circuit for solar power charging, so the control circuit set as 6.
- 6、 The alarm contact work as the short-current malfunction alarm contact, when the load has the short-current, the contact point put on, if not shut down.
- 7、 When the battery is over-charging or over-discharging,The solar controller alarm first, the load is still operating, avoiding the data loss or message break up, the alarm last 10 seconds, if the battery voltage is still the same after 10 seconds, the load will be stopped.
- 8、 in order to avoid the system voltage oscillate around the owe voltage point, it set up a return difference voltage.
- 9、 When the DC voltage is over 70VDC, the inverter source will under the over-voltage protection, when the battery voltage indicator light lighting,the AC output will be shut down.
- 10 The battery voltage and the return difference voltage can be adjust by the user,if the inverter is used in the solar power and wind power generating place, the battery is cycle using not floating charge, so ,the return difference voltage must be bigger, avoiding the battery over discharge.
- 11、 When the output over load, the over load indicator light go on and shut down the output, the light lighting and shut down the output.
- 12、 Please consider the power factor when the it's inductive load, if it is non linear load please consider the starter impulse. If the system has these two load, the inverter should drop its voltage for operating.
- 13 our inverter source use the heat elimination and isolated design, it can be used in 6000m high, if the altitude raise 1000m, the source should drop 5% for usage..

7 Our solar street light bulb:

1 LED street light bulb parameters

LED wattage	84W	98W	126W	140W	154W
No.(pcs)	84	98	126	140	154
Make of LED	Eutectic BGA	Eutectic BGA	Eutectic BGA	Eutectic BGA	Eutectic BGA

Anemakono.Ltd.Limited

Beam of LED	>120 degree	>120 degree	>120 degree	>120 degree	>120 degree
lumens	>8000lm >90lm/w	9500lm >90lm/w	12000lm >90lm/w	13500lm >90lm/w	15000lm >90lm/w
Colour temperature	Werm white:2200k to 3500k Pure white 4000k to 6300k	Werm white:2200k to 3500k Pure white 4000k to 6300k	Werm white:2200k to 3500k Pure white 4000k to 6300k	Werm white:2200k to 3500k Pure white 4000k to 6300k	Werm white:2200k to 3500k Pure white 4000k to 6300k
Life time	50000h to 80000h	50000h to 80000h	50000h to 80000h	50000h to 80000h	50000h to 80000h
material	aluminium	aluminium	aluminium	aluminium	aluminium
certificate	CE	CE	CE	CE	CE
Dimensions(mm)	655*350*78	704*350*78	788*350*78	872*350*78	872*350*78
Effective luminated area	Height 6m 7*23m Height 8m 9.2*28m Height 11m 11*35m Height 12m 13.6*42m	Height 6m 7*23m Height 8m 9.2*28m Height 11m 11*35m Height 12m 13.6*42m	Height 6m 7*23m Height 8m 9.2*28m Height 11m 11*35m Height 12m 13.6*42m	Height 6m 7*23m Height 8m 9.2*28m Height 11m 11*35m Height 12m 13.6*42m	Height 6m 7*23m Height 8m 9.2*28m Height 11m 11*35m Height 12m 13.6*42m
Central illuminouce	Height 6m 35lux Height 8m 22lux Height 11m 8.5lux Height 12m 6.5lux	Height 6m 38lux Height 8m 25lux Height 11m 13.5lux Height 12m 11lux	Height 6m 49lux Height 8m 30lux Height 11m 20lux Height 12m 15lux	Height 6m 55lux Height 8m 33lux Height 11m 23lux Height 12m 19lux	Height 6m 60lux Height 8m 36lux Height 11m 26lux Height 12m 21lux
Ip rating	IP65	IP65	IP65	IP65	IP65
CR rating	>85	>85	>85	>85	>85
Power factor	0.98	0.98	0.98	0.98	0.98
Gaurantee on products	3 years	3 years	3 years	3 years	3 years

2 LED street light bulb photos:



- 1 1pcs/1 wattage
- 2 can reach 100lm/w
- 3 Life time 50000h to 80000h
- 4 light depreciation: during 10000h 5%
- 5 special frame design for heat eliminations
- 6 3 years warranty
- 7 power factory >0.98,
save more energy.

8 quality Solar panel

<p>monocrystalline silicon</p>

Anemakono.Ltd.Limited

Type(wattage)	Working Voltage V	Working currentA	Open circuit voltage	Short current	Size mm	Power/unit	Module power
Sfg-100-M	23.5	4.26	28.8	4.63	1078x808x40	16%	17%
Sfg-110-M	23.5	4.68	28.8	5.09	1078x808x40	16%	17%
Sfg-130-M	23.8	5.04	28.8	5.56	1078x808x40	16%	17%
Sfg-140-M	17.5	7.73	21.5	8.06	1474x674x35	16%	17%
Sfg-150-M	34.56	4.05	43.00	4.34	1580x808x35	16%	17%
Sfg-120-M	34.56	4.34	44.2	4.52	1580x808x35	16%	17%

the size can be customized.

The solar panel sim imported from Taiwan

Make up in China mainland



9 Our factory's LED street light:

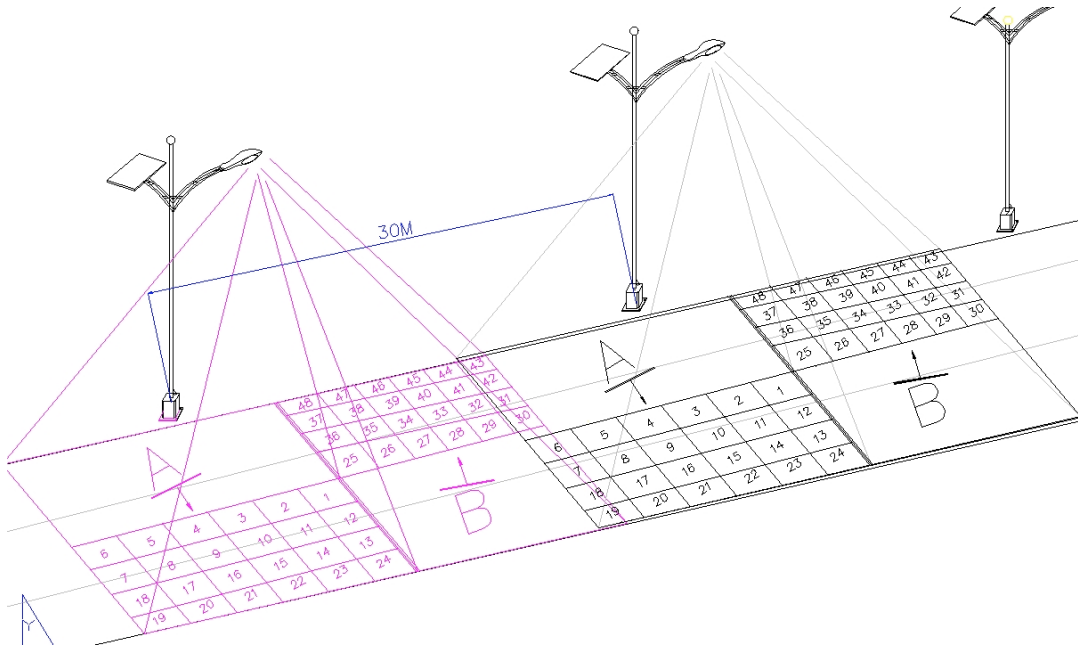


10 LED street light test method

According to the requirements of the customers, install the solar street lamp on the 4 lanes in the double ways, the distance between the each pole is 30 m , interlace on the opposite . Make sure that the cars' driver and the walkers can recognize the situations on the road without over tiredness ,reducing the traffic accident at night.

11 rectangle light spot

Our LED lamp base is a new light source which use the color temperature from different light source, producing according to the LED theory. It uses different reflecting coating to make the whole lighting assembly to produce the rectangle light spot . show as the photo:



12 LED light source luminance test method

using 4 lamp to simulate six lanes road, adopting the center method to have test: take the distance between the two lamp of the road , and then cut the road which is measured into many same size rectangle , as a grid. The test point is the center of the rectangle, shown as the photo:

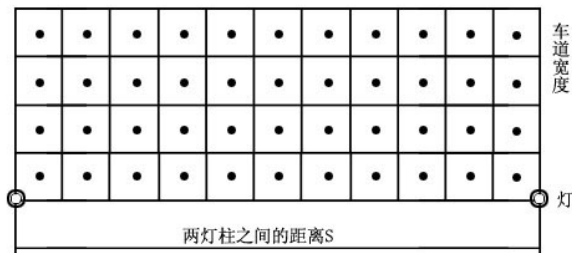


图7 双车道道路采用中心法布点时的测点布置图

Each length of the grid is 3M,.In the landscape orientation of the road , we cut the road in to 8 parts equally, gaining the luminance tested data of each part.

13 level average luminance and the evenness degree calculation.

1)level average luminance calculation.

$$E_{av} = \frac{\sum E_i}{n}$$

E_{av} means the average luminance of the road (Lux)

E_i means the luminance value of each test point. (Lux)

N test point quantity.

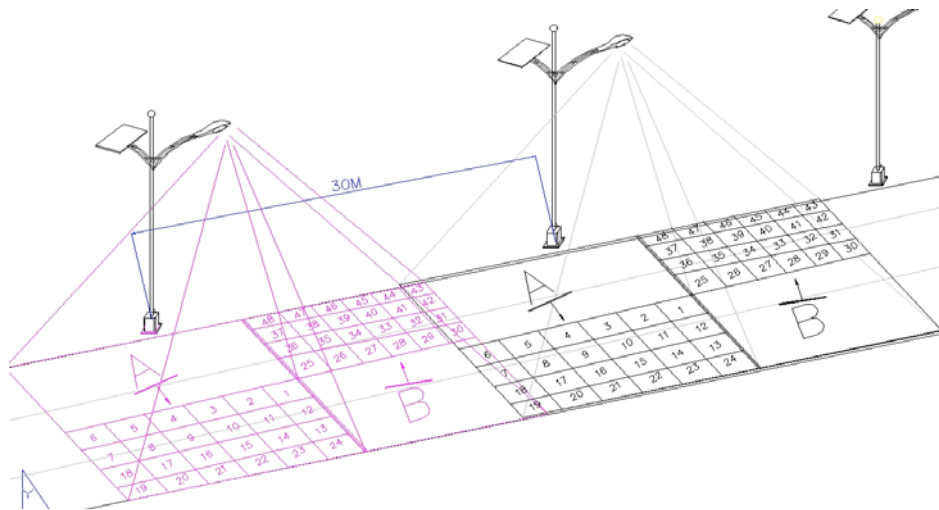
2)、the evenness degree calculation

Road evenness degree is U , the min luminance of the road is E_{min} , average luminance is E_{av} ,

so:
$$U = \frac{E_{min}}{E_{av}}$$

$E_{av} = \frac{\sum E_i}{n}$, E_{min} -- Can be test by measuring the luminance of the point in the grid.

14 Testing data



测试点 区域	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
A区	25	23	22	20	19	18	16	19	20	22	24	25	23	22	21	19	17	15	11	15	17	19	21	23
B区	26	23	21	20	18	21	19	17	20	22	24	26	22	20	18	18	17	15	11	14	15	19	21	23

From the data list :

Center max luminance 26Lux

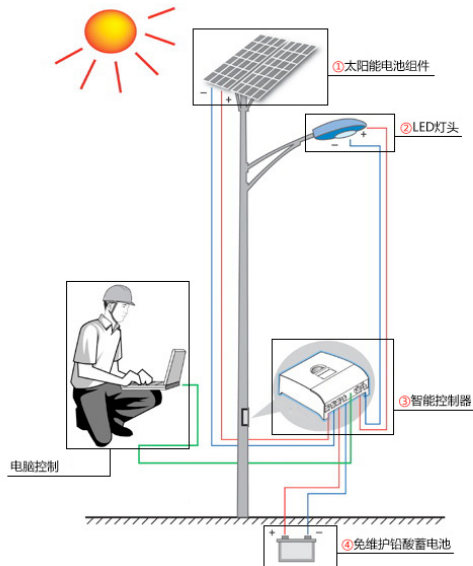
Average luminance 19.2 Lux

Luminance even mode 0.57

15 Street light engineer projects:



16 How to fixing the street light:



17 Street light informations:

84watt street light bulb

1、Solar energy module: 285w

Anemakono.Ltd.Limited

- 2、 Battery: 150AH 2 pcs
- 3 Battery box 2 pcs
- 4 Controller: 200watt
- 5、 Light source : 84W
- 6 takle box: 1pcs
- 7、 Cable: China standard

B Have certificate

- Battery CE
- Controller CE
- Lamp cap CE
- Solar energy CE

TUV certification for PV power system.

8 hour working time each day, 5 days working time in the rainy days

126watt street light bulb

A

- 1、 Solar energy module: 379W
- 2、 Battery: 200AH 2 pcs
- 3 Battery box 2 pcs
- 4 Controller: 400watt
- 5、 Light source : 126W
- 6 takle box: 1pcs
- 7、 Cable: China standard

B Have certificate

- Battery CE
- Controller CE
- Lamp cap CE
- Solar energy CE

TUV certification for PV power system.

8 hour working time each day, 5 days working time in the rainy days

Enrique,Devesa Coria

Anemakono.ltd.Limited