NEX Solatron

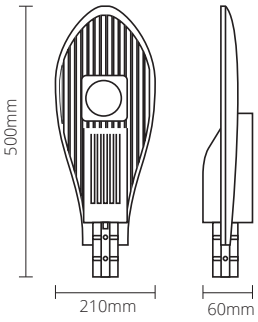
LED Street LIght

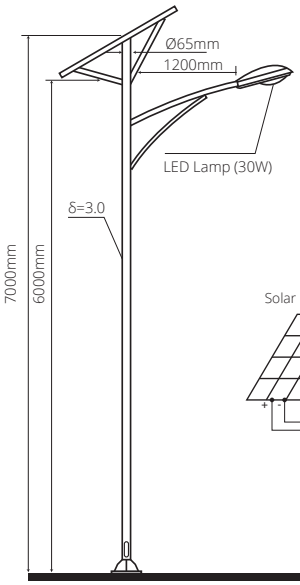
30W

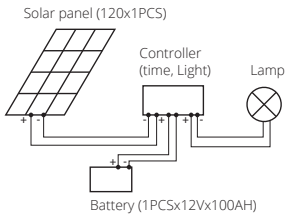
≥3400Lm

CRI≥80

PF≥0.98







Specifications

Product Name	Solatron ST-30	**Material of Lens**	Optical glass
LED Power	30W	**Light Transmission of LED Lens**	≥92%
Luminous Flux	≥3400lm		
Illumination	6M≥26LUX	**Operating Temp.**	-40°C to 70°C
Illumination Area	W18xH6M	**Operating Humi.**	10% to 90%
Color Temp.	Warm white (3000K±300) Natural white (5000K±400) Cool White (6000K±500)	**Junction Temp.**	42°C
		Battery	100AH/12V 1pcs
CRI	Ra≥80	**Certificate**	CE, RoHS, ISO
Beam Angle	120°	**LED Life Span**	≥100000Hrs.
Input Voltage	DC12V	**Warranty**	
Power Factor	≥0.98	**LED Lamp**	5 Years
Controller	10A/12V	**Solar Panel**	10 Years
		Controller	2 Years
IP Protection	IP67	**Battery**	3 Years
Equivalent	90W H.P.S		
Dimension	W210xH500xD60mm		
Pole Height	7M		
Net Weight	2.3 kg		
Material	Aluminum Die-casting		

Remark: The information contained in this document is subject to change without notice.

CE RoHS ISO

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Solatron

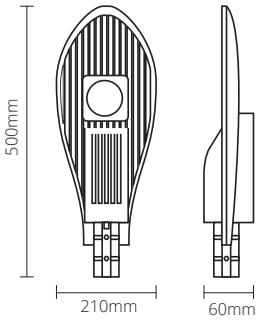
LED Street LIght

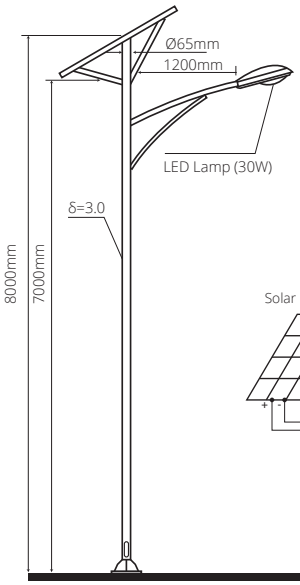
50W

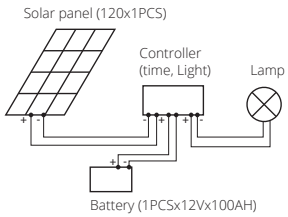
≥5400Lm

CRI≥80

PF≥0.98







Specifications

Product Name	Solatron ST-50	**Material of Lens**	Optical glass
LED Power	50W	**Light Transmission of LED Lens**	≥92%
Luminous Flux	≥5400lm		
Illumination	7M≥28LUX	**Operating Temp.**	-40°C to 70°C
Illumination Area	W25xH8M	**Operating Humi.**	10% to 90%
Color Temp.	Warm white (3000K±300) Natural white (5000K±400) Cool White (6000K±500)	**Junction Temp.**	42°C
		Battery	100AH/12V 1pcs
CRI	Ra≥80	**Certificate**	CE, RoHS, ISO
Beam Angle	120°	**LED Life Span**	≥100000Hrs.
Input Voltage	DC12V/24V	**Warranty**	
Power Factor	≥0.98	**LED Lamp**	5 Years
Controller	15A/24V	**Solar Panel**	10 Years
		Controller	2 Years
IP Protection	IP67	**Battery**	3 Years
Equivalent	150W H.P.S		
Dimension	W210xH500xD60mm		
Pole Height	8M		
Net Weight	2.5 kg		
Material	Aluminum Die-casting		

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CE RoHS ISO

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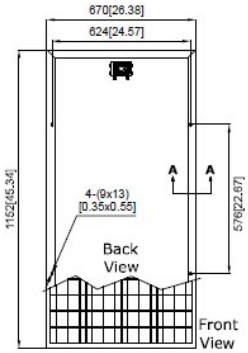
SY-M110W

High Efficiency, High Quality PV Module

Electrical Characteristics	SY-M110W
Maximum power (Pmax)	110W
Voltage at Pmax (Vmp)	17.4V
Current at Pmax (Imp)	6.33A
Open-circuit voltage (Voc)	22.0V
Short-circuit current (Isc)	6.67A
Temperature coefficient of Voc	-(0.40 ± 0.05)%/ °C
Temperature coefficient of Isc	(0.065 ±0.01)% /°C
Temperature coefficient of power	-(0.5±0.05)%/ °C
NOCT (Air 20°C; Sun 0.8kW/m² wind 1m/s)	47±2°C
Operating temperature	-40°C to 85°C
Maximum system voltage	600V DC
Power tolerance	+ 3%
Cells	multicrystalline silicon solar cell
No. of cells and connections	36(4X9)
Module Dimension	1152mmx670mmx30mm
Weight	8.4kg

* STC:Irradiance 1000W/m², AM1.5 spectrum, module temperature 25°C
* Specifications are subject to change without notice at any time.

Module Diagram



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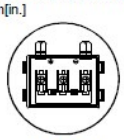
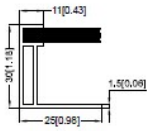
Un-bracketed dimensions are in millimeters.
Unit:mm[in.]

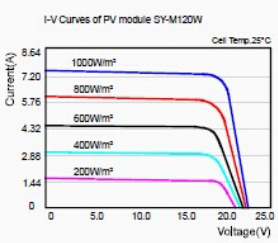


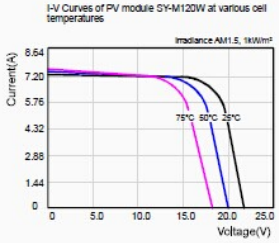
Junction Box
Top View (Lid open)



Section A-A

I-V Curves





IEC CE RoHS

Key Features:

- High module efficiency and stable power output
- Based on leading process technology
- Outstanding electrical performance undeer high temperature conditions or low irradiance conditions
- Easy of installation and all-weather applications
- 5 years product warranty(materials and workmanship)
- 20 years module power output warranty
- Peak power of single module is guaranteed in +3% power tolerance
- Strong framed module,passing loaded test of 5400 Pa (IEC61215 2nd)
- The manufacture is certified for ISO 9001:2000

Product's Guarantee

- 5 years products life warranty
- 15 years module power output no less 90%
- 20 years module power output no less 80%

Applications

- Off grid residential roof-tops
- Off grid commercial/industrial roof-tops
- Rural area applications
- Solar power system
- Other off-grid applications

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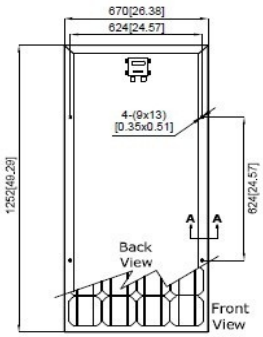
SY-S120W

High Efficiency, High Quality PV Module

Electrical Characteristics	SY-S120W
Maximum power (Pmax)	120W
Voltage at Pmax (Vmp)	18V
Current at Pmax (Imp)	6.68A
Open-circuit voltage (Voc)	22.2V
Short-circuit current (Isc)	7.21A
Temperature coefficient of Voc	-(0.40 ± 0.05)%/ °C
Temperature coefficient of Isc	(0.065 ±0.01)% /°C
Temperature coefficient of power	-(0.5±0.05)%/ °C
NOCT (Air 20°C; Sun 0.8kW/m² wind 1m/s)	47±2°C
Operating temperature	-40°C to 85°C
Maximum system voltage	600V DC
Power tolerance	+ 3%
Cells	monocrystalline silicon solar cell
No. of cells and connections	36(4X9)
Module Dimension	1080mm[42.51in.]x830mm[32.68in.]x35mm[1.37in.]
Weight	9.84kg[21.69lbs]

* STC:Irradiance 1000W/m², AM1.5 spectrum, module temperature 25°C
* Specifications are subject to change without notice at any time.

Module Diagram



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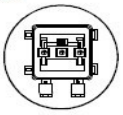
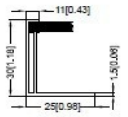
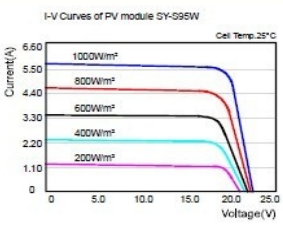


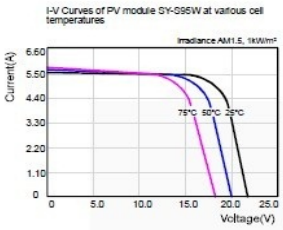
Junction Box
Top View (Lid open)



Section A-A

I-V Curves





IEC CE RoHS

Key Features:

- High module efficiency and stable power output
- Based on leading process technology
- Outstanding electrical performance undeer high temperature conditions or low irradiance conditions
- Easy of installation and all-weather applications
- 5 years product warranty(materials and workmanship)
- 20 years module power output warranty
- Peak power of single module is guaranteed in +3% power tolerance
- Strong framed module,passing loaded test of 5400 Pa (IEC61215 2nd)
- The manufacture is certified for ISO 9001:2000

Product's Guarantee

- 5 years products life warranty
- 15 years module power output no less 90%
- 20 years module power output no less 80%

Applications

- Off grid residential roof-tops
- Off grid commercial/industrial roof-tops
- Rural area applications
- Solar power system
- Other off-grid applications

10A/20A/12V/24V PMW Solar controller Technical parameter

SR-SD series Solar Intelligent Charging Controller

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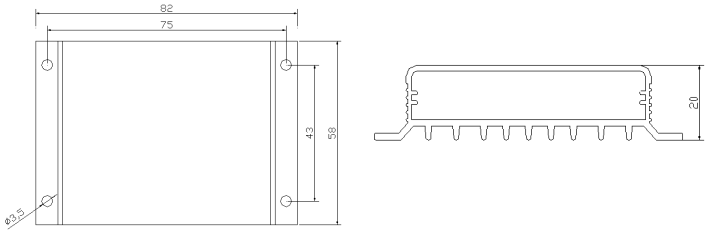
Operation instruction manual

□. Main features

1. Constant current LED source is internally installed and its efficiency can reach 96%.
2. With intelligent four phases PWM digital dimming, the capacity control is much more accurate and the performance of color temperature is perfected.
3. Outstanding ripple current control and degree of linearity control utmost lessening the luminance decrease of LED and increase the LED life span.
4. Ceramic capacitor design extends the service life.
5. IP 68 waterproof level and aluminum outer shell is able to effectively prevent various kinds of corrosion.
6. The output voltage is 70V, which can drive 20 LED lamps installed in series.
7. With modified calculation of charging, the charging efficiency is improved, which lengthen the using time of solar energy.
8. Unique test model. One key operation realizes the power switching.
9. The metal outer casing design.
10. varies system protection

□. Installation and wiring

1. Installation of controller should be stable and dimensions are as follows:
   Overall dimension: 82×58×20(mm)
   Installation dimension: 43×75(mm)
   Installation hole diameter: 3.5(mm)



2. SR-SD series controller can work under 12V or 24V voltage. Please connect storage battery at first for use. Controller will automatically identify voltage of storage battery and start to work. If it is the 12V system, the nixie tube will show ‘0’. If it is the 24V system, the nixie tube will show ‘1’.
3. Please connect the storage battery first, then the photoelectric cell and the load. Pay attention to the “+” and “–” in case of reverse connection.
4. The anti-reverse connection is available. Even you connect the photocell and battery wrongly, the controller will not be harmed.
   Wiring diagram is as follows:

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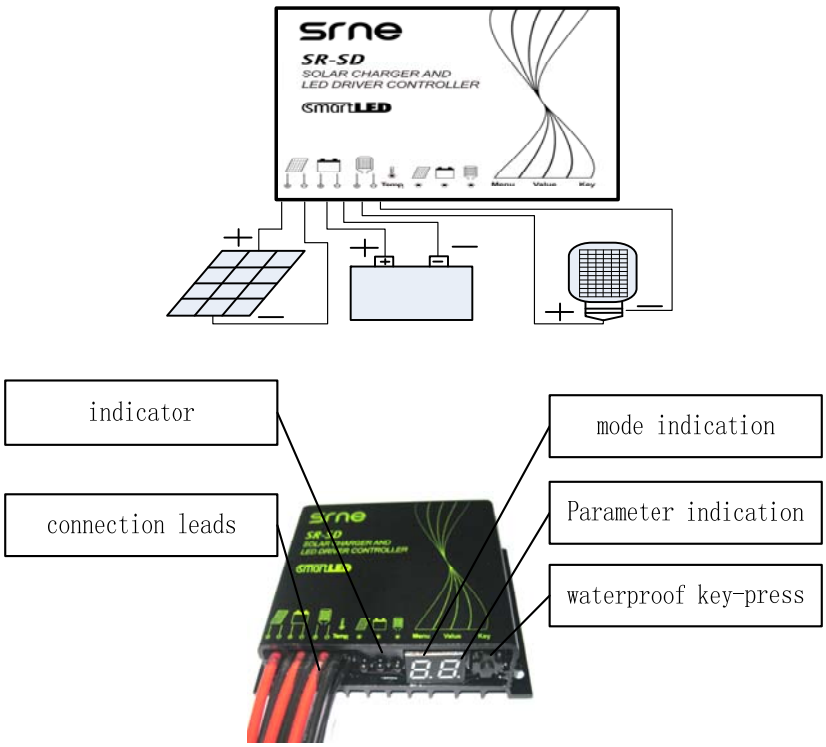


□. Connection of LED

1. The SR-SD Controller is internally installed with constant current source. The max. output voltage is 70V. The max. amount of LED lights can be connected is 20.
2. The SR-SD controller can automatically identify voltage of 12V and 24V. While connect with LED load, please ensure the number of LED lights in series is appropriate.
   The following data is we recommended.

System voltage	The Min.No.(n) Of LED lights In series	Output voltage	Output power
12V	n ≥ 5	V_O ≥ 16V	P_{LED} ≤ 50W
24V	n ≥ 10	V_O≥ 32V	P_{LED} ≤ 120W

3. Please connect LED light first and then open the load.

Warning: if the number of LED in series is not appropriate, the controller of the LED load will be harmed.

□. Status indications

LED lamp	Indications	Status	Functions

	Being charged	Long-term On	There is voltage on battery panel
		Long-term Off	There is no voltage on battery panel
		Slow twinkling	Being in charged
		Fast twinkling	Overpressure of system
	Storage Battery	Long-term On	Storage battery works normally
		Long-term Off	Storage battery is not connected
		Slow twinkling	Storage battery is undervoltage
		Fast twinkling	Storage battery is excessively discharged
	Load	Long-term On	Load is on. Working with power of 100%
			Load is on. Working with power of 75%
			Load is on. Working with power of 50%
			Load is on. Working with power of25%
		off	The load is off

□. Introduction of mode and table of settings

SR-SD series controller has two working modes. Table of settings is as follows:

1. Light control + time control (1.-4.): When there is no sunlight, the light intensity will fall to the starting point. The controller will affirm the starting signal after a delay of 10 minutes. Load will be opened as per set parameters to start working and will switch the power as per the set time. When there is sunlight, the light intensity will rise up to the starting point. The controller will close output after confirming closing signal in a delay of 10 minutes and the load will stop working.
2. Demo mode (5.): Under this mode the user can control the on and off of load by keys no matter it is day or night. The time for demo mode is 8 seconds. Without key press after 8 seconds, it will back to the normal working mode.

LED1 Display	Mode	LED 2 Display	parameter
1.	Working with 100% power	0 – 4.	Working for 0-14 hours with 100% power

2.	Working with 75% power	0 – 4.	Working for 0-14 hours with 75% power
3.	Working with 50% power	0 – 4.	Working for 0-14 hours with 50% power
4.	Working with 25% power	0 – 4.	Working for 0-14 hours with 25% power
5.	Demo mode	0 – 4	0 load is off 1 load works with 100% power 2 load works with 75% power 3 load works with 50% power 4 load works with 25% power

□. Methods for setting

1. Modes and parameter scan

There are two nixie tubes installed on the controller. The first one shows the modes and the second shows the parameter under the mode. In normal state, the mode and parameter will show from nixie tubes after the key-press. Every key-press shows different number (mode) in first nixie tube and the the parameter changes accordingly in the second one.

2. Adjustment of parameter.

Press a key for more than 3s till the nixie tube shows the parameter starting to twinkle. Release the key and then press the key again, figures of nixie tube will change one digit each time until digits shown on the nixie tube match the digits corresponding to the mode the user has selected. Wait until the nixie tube stop twinkling or press the key again for more than 3s to finish the setting process.

3. Demo mode.

After finishing the “mode and parameter scan” process, adjust the fist nixie tube showing 5, then press the key more than 3s till the second nixie tube start twinkling. After that, the parameter in second nixie tube changes every time as per the key press. At the same time, the load power will change as described in “modes and table of setting”. After that, please wait till the nixie tube stop to twinkling and back to the normal working mode.

1. **□. Instructions for parameters**

System voltage	12V/24V Auto
Output current	330mA – 2310mA
No-load loss	5mA/12V;7mA/24V
Solar input voltage	< 55V
The Max. charging current	8A
Overvoltage protection	17.0V; ×2/24V
Equal charging voltage	14.6V; ×2/24V(25□), duration:1h
Ascending charging voltage	14.4V; ×2/24V(25□), duration:2h
Float charging voltage	13.8V; ×2/24V (25□)
Return voltage during charging	13.2V; ×2/24V (25□)

Return voltage for over-discharging	12.5V; ×2/24V
Over-discharging voltage	11.1V; ×2/24V
Temperature compensation	-4.0mv/□/2V;
Light-control voltage	Light-control open 5V; light-control close 6V
Efficiency of constant current	90% - 96%
Current accuracy	+/-2%
Light-control judgment time	10min
The Max. output voltage	＜70V
Light control voltage	Light control on 5V and off 6V
Working temperature	-40□ to +70□;
Protection level	IP68
Weight	160g
Dimensions	82×58×20(mm)(L×W×H)

Battery Technical parameter

100AH/12V GE Battery Technical parameter

JFM12V100 GEL

Maintenance-Free Rechargeable Sealed GEL Battery

SPECIFICATIONS

Nominal Voltage (V) 12V

Rated Capacity:

20hour rate (5.10A 10.80V) 102AH

10hour rate (10.0A 10.50V) 100AH

5hour rate (16.00A 10.20V) 80AH

1 hour rate (60A to 9.6V) 60AH

Weight: 30.2kg

Internal Resistance (at 1 KHz) 10mΩ

Maximum Discharge Current for

5 seconds: 500.0A

Operating Temperature Range

Charge -20℃(-4℉) to 40℃(104℉)

Discharge -30℃(-22℉) to 50℃(122℉)

Storage -30℃(-22℉) to 40℃(104℉)

Charge Retention (shelf life) at 20℃(68℉)

3 month 94%

6 month 85%

12 month 63%

Charging Methods at 25℃ (77℉)

Charging Voltage 14.5to14.9V

Average charging voltage: 14.1to14.3V

Maximum Charging Current 30A

Standby use:

Float Charging Voltage 13.5to13.8V

No current limit required

Discharge Current VS. Discharge Voltage

Final Discharge Voltage（V）	10.5V	10.2V	9.6V
Discharge current(A)	(A)≤20	20≤ (A)≤100	(A)≥100

Life expectancy:

Cycle Use: 100% depth discharge 400cycles

50% depth discharge 800cycles

20% depth discharge 1500cycles

Standby Use: 6- 8 years

Case Material: ABS

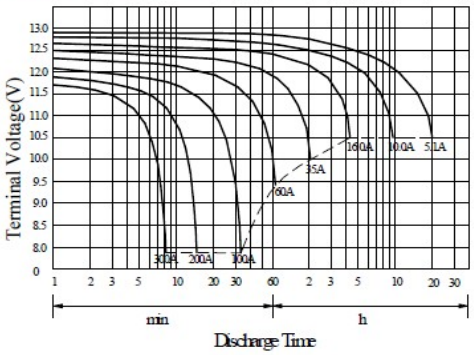
Terminal: embedded M8 copper core (T8)

Dimensions: L330*W173*216(mm)

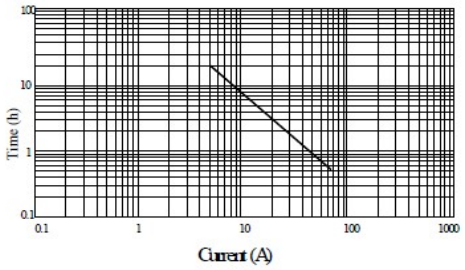
Total Height (with terminals) 225(mm)

Product picture

Discharge characteristic Curve



Discharge Time vs. Discharge Current



* The above data are of average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values

Mh28469 CN02/0326

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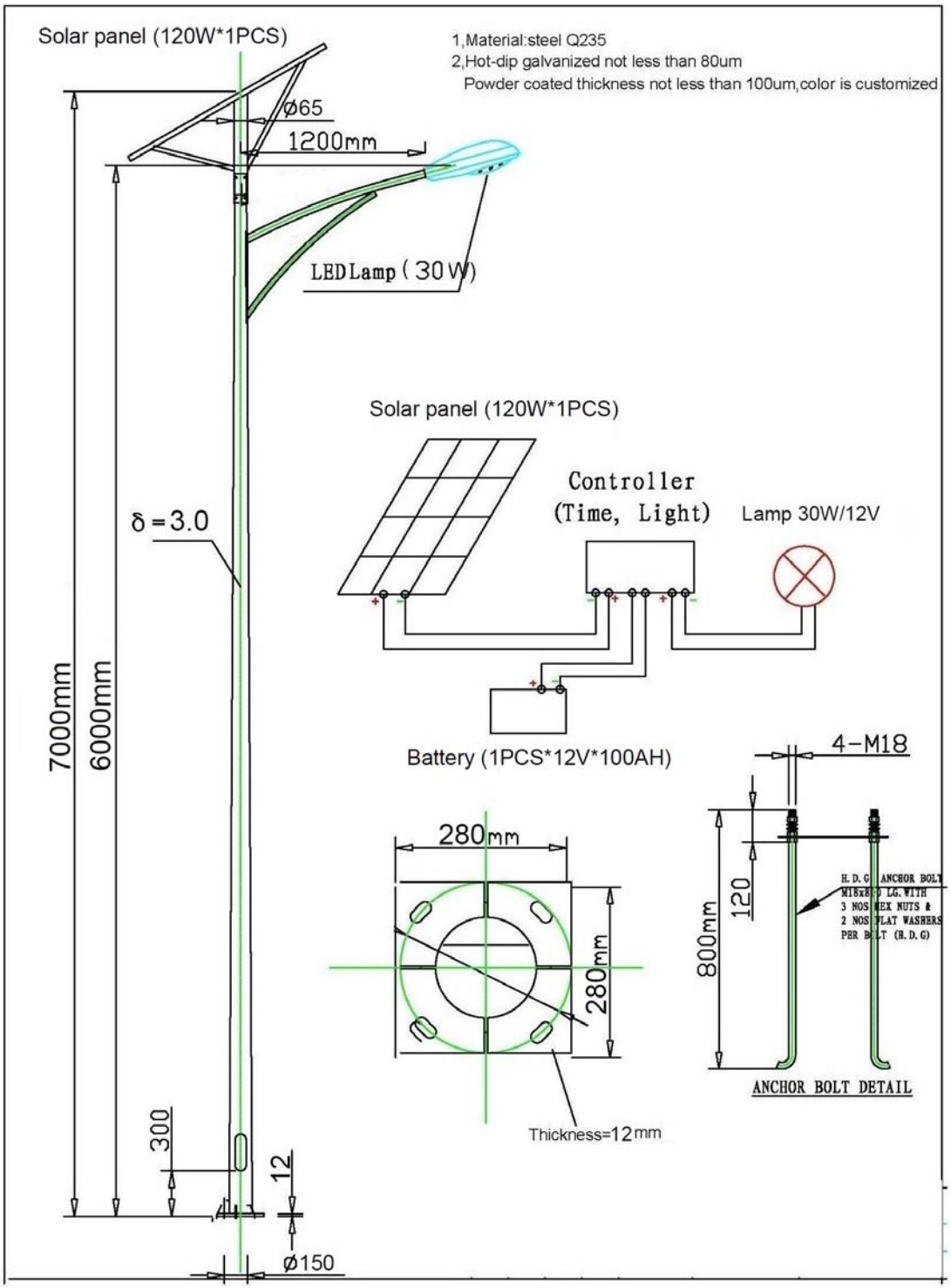
30W 7M SOLAR STREET LIGHT DRAWING



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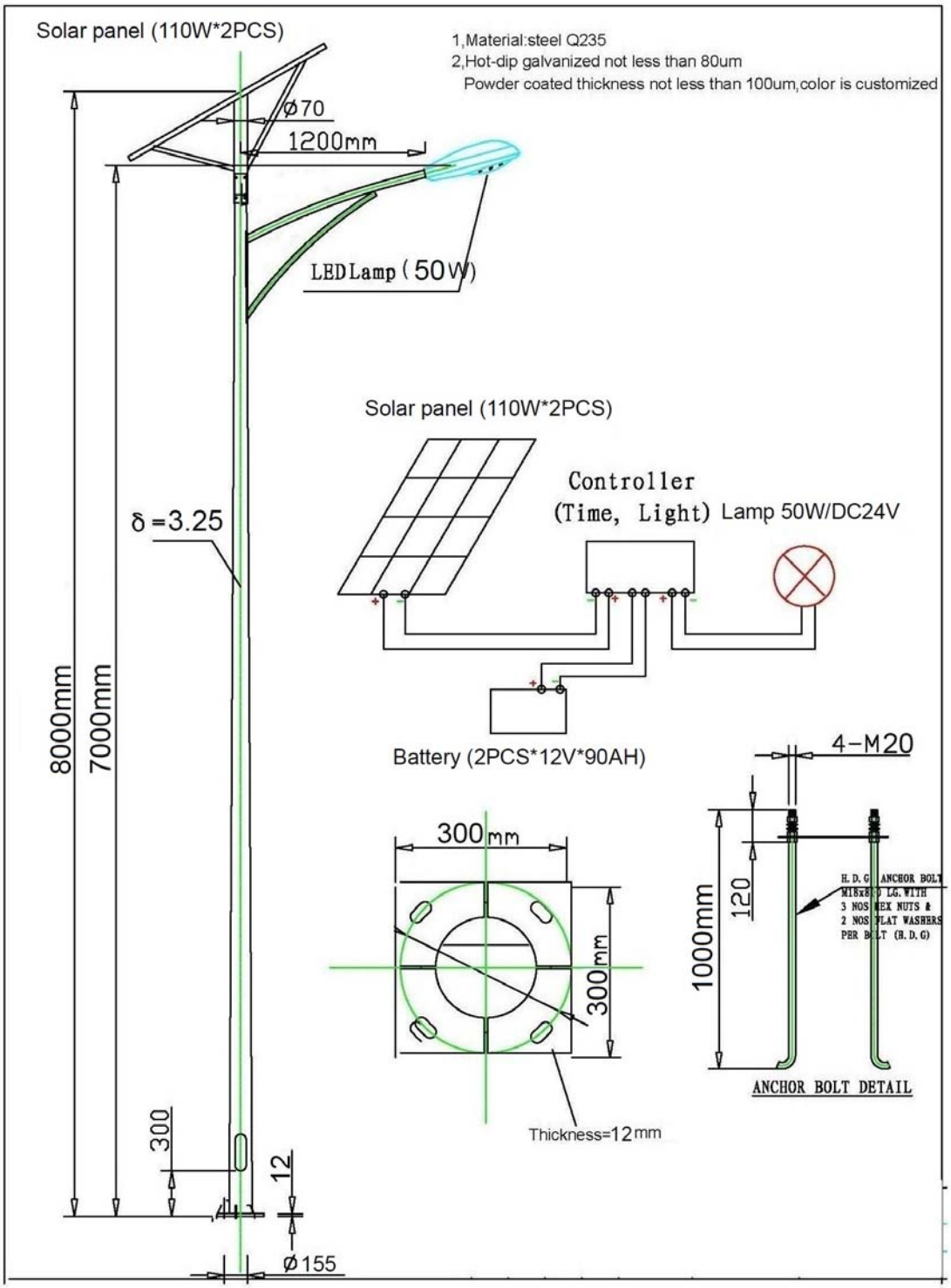
50W 8M SOLAR STREET LIGHT DRAWING



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