TEMPLUX

2025
New Design

TL-ROBOT SERIES
Auto-Cleaning Integrated Solar Street Light

ROBOT

Auto-Cleaning Integrated Solar Street Light

Designed to tackle the challenges of sandy and dusty environments, the Auto-Cleaning Integrated Solar Street Lights offers an innovative and ultimate lighting solution. Integrating efficient power generation, intelligent energy storage, and smart lighting capabilities, its standout feature is an "automatic self-cleaning system". This system actively detects and removes sand, dust, and debris from the solar panels,addressing the issue of dust accumulation that reduces power generation efficiency. It ensures exceptionally high energy conversion rates even in harsh conditions.
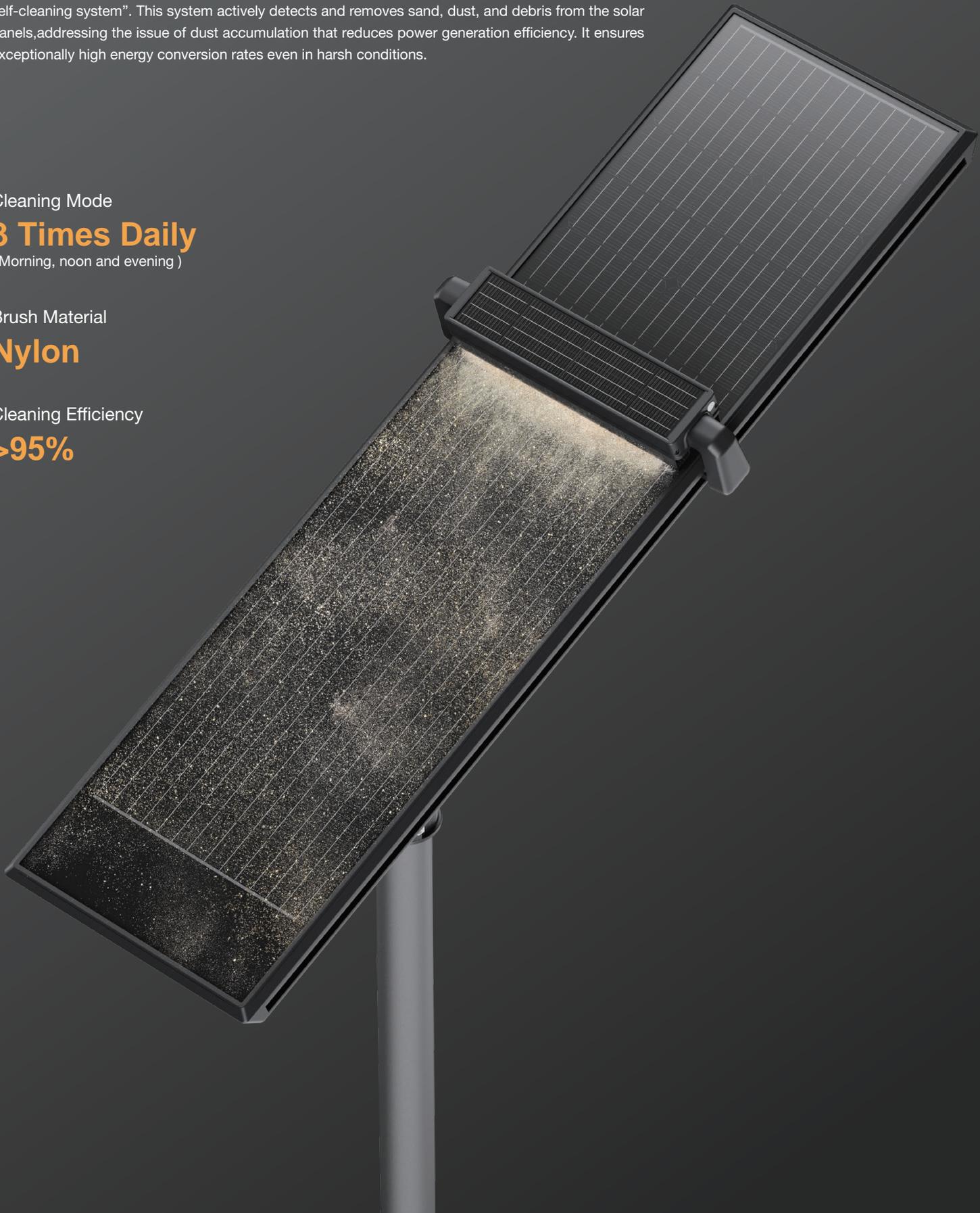
Cleaning Mode
3 Times Daily
(Morning, noon and evening)

Brush Material
Nylon

Cleaning Efficiency
>95%

Adjustable Bracket

Equipped with a durable and adjustable mounting bracket, it adapts seamlessly to horizontal and vertical pole mounts. This design allows for optimal light collection and custom lighting angles, improving performance and simplifying installation without the need for additional hardware.

Adjustable LED Module

Featuring a fully rotatable LED module, this light ensures precise and efficient illumination tailored to diverse applications. Combined with high-lumen output and advanced optics, the design optimizes lighting distribution for enhanced uniformity and reduced energy waste.

High-Efficiency Solar Panel
with Exceptional Craftsmanship

The solar panel integrates cutting-edge technology with meticulous craftsmanship, delivering high conversion efficiency. Its innovative design ensures maximum energy generation, even under less-than-ideal sunlight conditions, making it a top-tier solution for sustainable lighting needs.
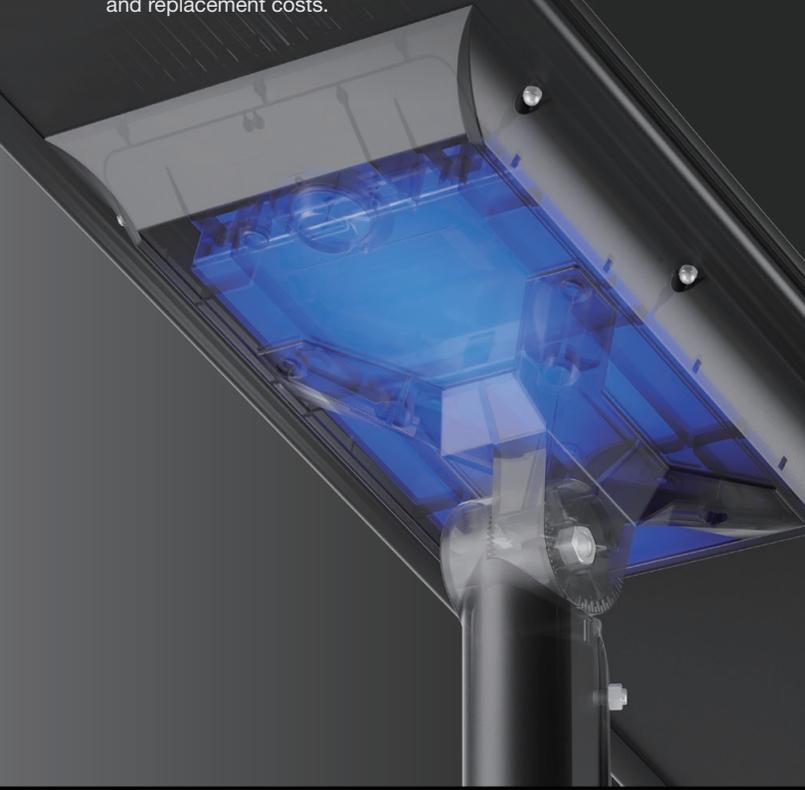
Solar Cleaning Robot

Automatically start the cleaning mode to reduce power generation losses. No manual maintenance is required in desert areas throughout the year, saving water and labor, and maintaining optimal power generation efficiency for a long time.
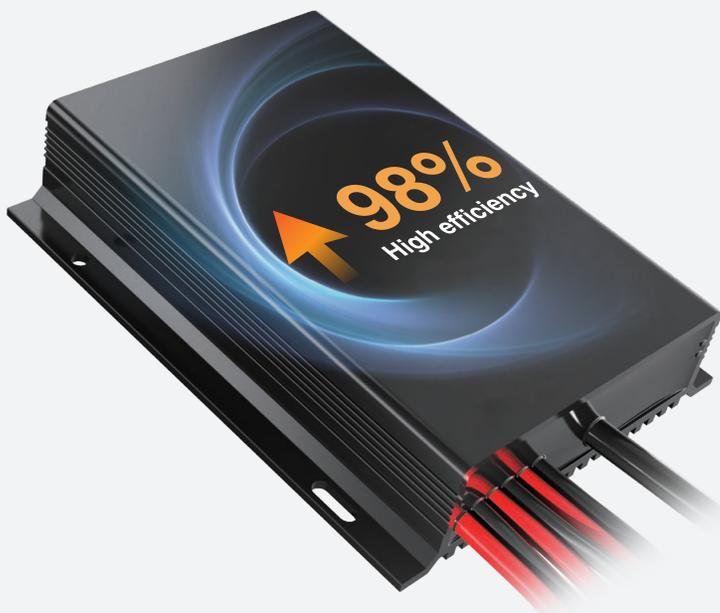
Long-Life LiFePO4 Battery

Equipped with high-performance LiFePo4 batteries, it can perform more than 4,000 deep charge and discharge cycles, ensuring reliable operation for up to ten years and significantly reducing maintenance and replacement costs.

High Brightness LED Chips

Equipped with high-brightness SMD 5050 LEDs delivering up to 170 lm/W, it ensures outstanding energy efficiency while enhancing visibility, safety, and service life.

MPPT Charge Controller

maximizes energy efficiency ensuring longer battery life and consistent illumination without blackout.
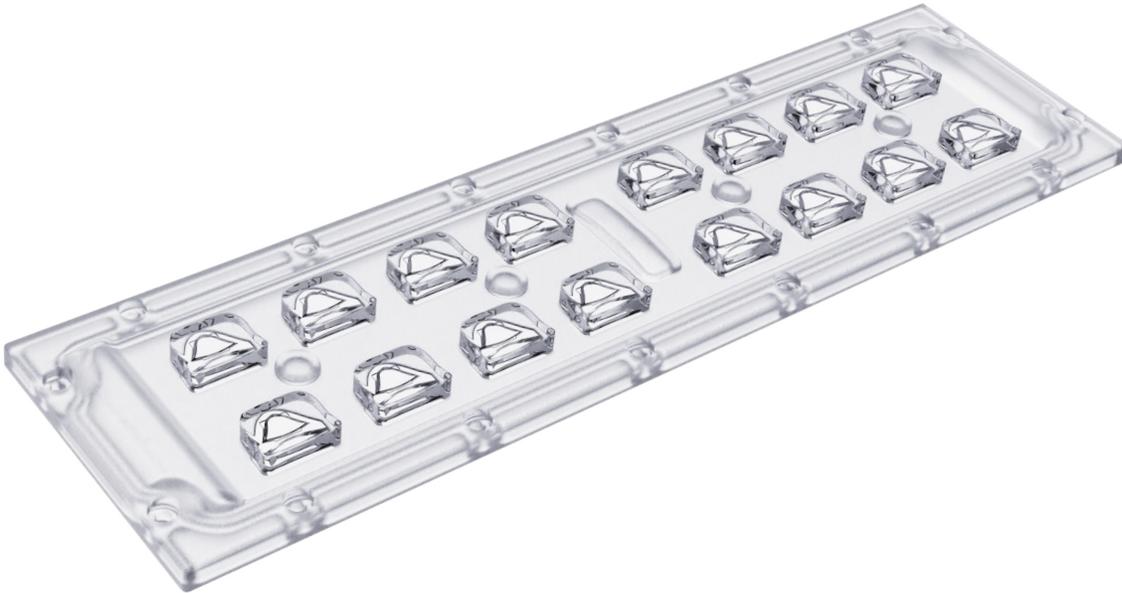
98%
High efficiency

Optional

4G Wireless Smart Control System

Single light control ·
Malfunction management ·
Energy consumption analysis ·
Intelligent monitoring ·

ULTRA SLIM LED OPTIC

Optics is a crucial component of the solar street luminaire, yet it is often overlooked. The appropriate optic is selected based on project conditions such as road width, pole height, and pole spacing.

SHINEBOT is equipped with specially designed LED optics which is to illuminate the main road without wasting light out of road. It use a very narrow but very long lighting distribution pattern which ensures there is no black dot between the poles. With high brightness output and super narrow lighting distribution, it deliver a very smooth and uniform performance on the road, meanwell with the help of longer lighting distance, there will be less quantity of poles which reduce the project cost a lot.

Light Distribution Curve

+/-180

-90°   90°

0°

Luminaire

C0/C180: ——   C90/C270: ——

| 0 | 2.50 | 5 | 7.50 | 10 | 12.50 | 15 | 17.50 | 20 | lx |
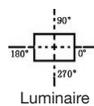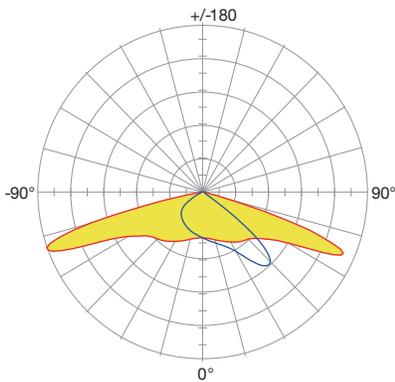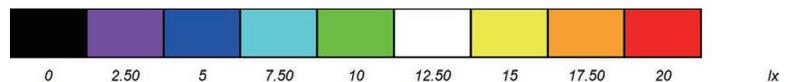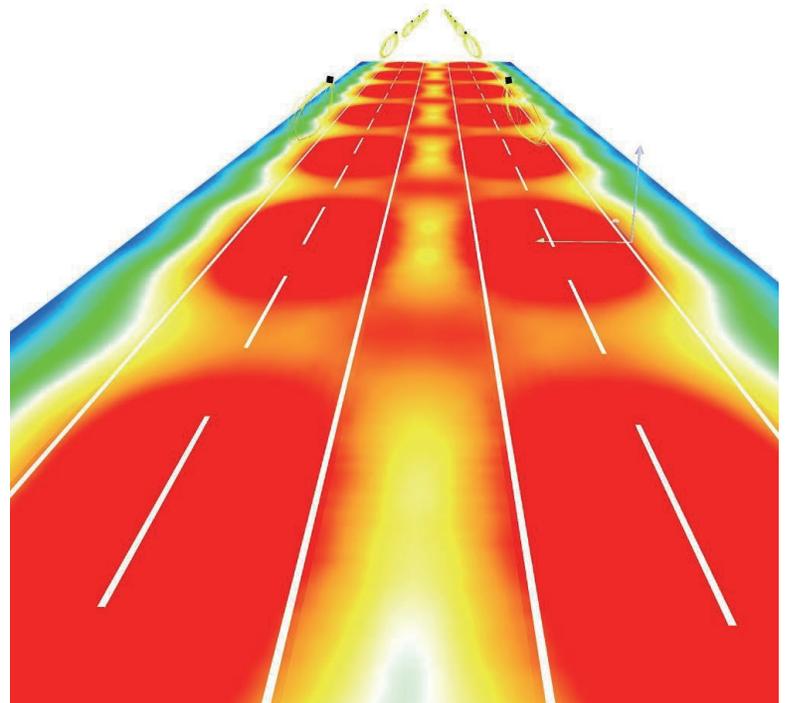
ROBOT | 60W

DIMENSION

Unit: mm

PARAMETER

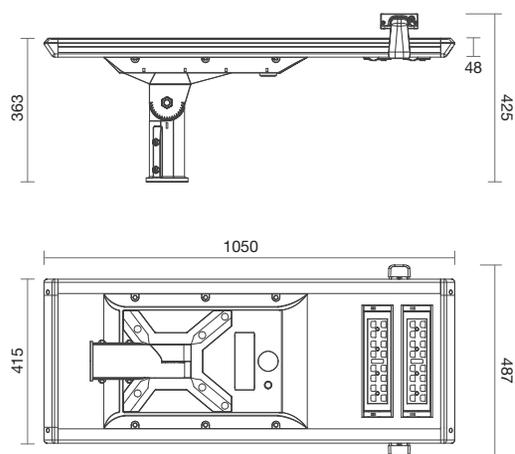|			
Model	TL-ROBOT-60	Cleaning Robot	Solar Panel 5W / Battery 43Wh
Luminous Flux	10,200lm	Cleaning Mode	3 Times Daily (4 Passes Each)
LED Power	60W	Solar Controller	High Efficiency 97% MPPT
LED Chip	SMD 5050	Motion Sensor	PIR/Microwave Optional
LED Quantity	24PCS	Installation Height	4~10m
LED Lifetime	>100,000 hours	Operating Temp.	-40°C~+85°C
CRI	>78	Fixture materials	Aluminium Die Casting
CCT Range	2200K~6000K	Fixture color	Gray / Black
LiFePO4 Battery	12.8V 460WH	IP Rating	IP65
Battery Lifetime	4000 cycles @ D.0.D 50%	Dimension	1050*415*363mm
Solar Panel	72W 18V MONO	Net Weight	●
Solar Cells Efficiency	22.3%	CTN SIZE	●
Pole Diameter	60mm/76mm Optional	Warranty	5 years

ROBOT | 80W

DIMENSION
Unit: mm

363 | 48 | 425
1245
415 | 487
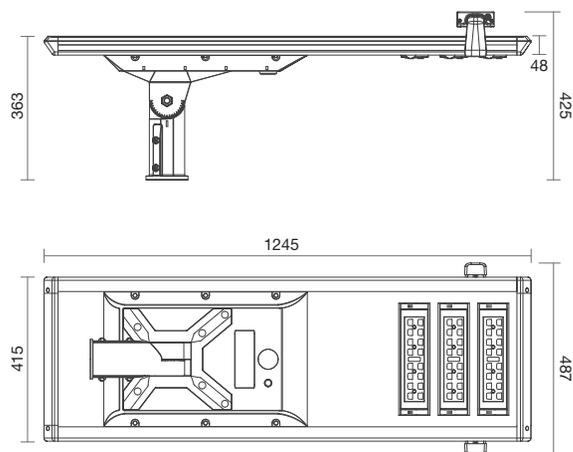
PARAMETER

Model	TL-ROBOT-80	Cleaning Robot	Solar Panel 5W / Battery 43Wh
Luminous Flux	13,600lm	Cleaning Mode	3 Times Daily (4 Passes Each)
LED Power	80W	Solar Controller	High Efficiency 97% MPPT
LED Chip	SMD 5050	Motion Sensor	PIR/Microwave Optional
LED Quantity	48PCS	Installation Height	6~12m
LED Lifetime	>100,000 hours	Operating Temp.	-40°C~+85°C
CRI	>78	Fixture materials	Aluminium Die Casting
CCT Range	2200K~6000K	Fixture color	Gray / Black
LiFePO4 Battery	12.8V 614WH	IP Rating	IP65
Battery Lifetime	4000 cycles @ D.0.D 50%	Dimension	1245*415*363mm
Solar Panel	93W 18V MONO	Net Weight	●
Solar Cells Efficiency	22.3%	CTN SIZE	●
Pole Diameter	60mm/76mm Optional	Warranty	5 years

ROBOT I 100W

DIMENSION
Unit: mm

363   48   425

1535   415   487
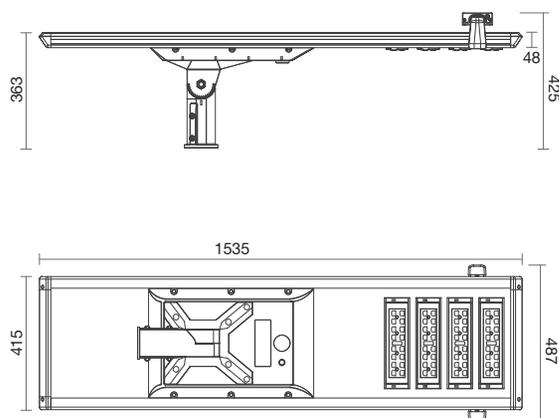
PARAMETER

Model	TL-ROBOT-100	Cleaning Robot	Solar Panel 5W / Battery 43Wh
Luminous Flux	17,000lm	Cleaning Mode	3 Times Daily (4 Passes Each)
LED Power	100W	Solar Controller	High Efficiency 97% MPPT
LED Chip	SMD 5050	Motion Sensor	PIR/Microwave Optional
LED Quantity	64PCS	Installation Height	6~12m
LED Lifetime	>100,000 hours	Operating Temp.	-40°C~+85°C
CRI	>78	Fixture materials	Aluminium Die Casting
CCT Range	2200K~6000K	Fixture color	Gray / Black
LiFePO4 Battery	12.8V 768WH	IP Rating	IP65
Battery Lifetime	4000 cycles @ D.0.D 50%	Dimension	1535*415*363mm
Solar Panel	116W 18V MONO	Net Weight	●
Solar Cells Efficiency	22.3%	CTN SIZE	●
Pole Diameter	60mm/76mm Optional	Warranty	5 years

ROBOT l 120W

DIMENSION
Unit: mm
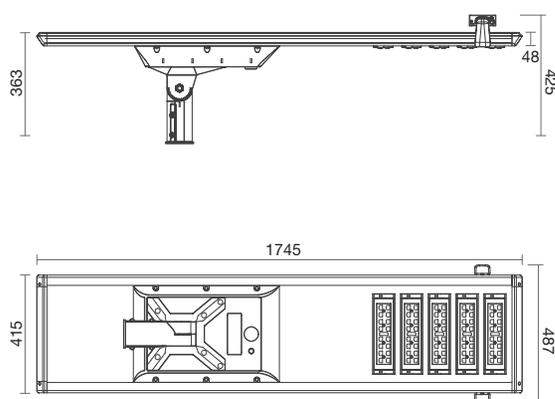
PARAMETER

Model	TL-ROBOT-120	Cleaning Robot	Solar Panel 5W / Battery 43Wh
Luminous Flux	20,400lm	Cleaning Mode	3 Times Daily (4 Passes Each)
LED Power	120W	Solar Controller	High Efficiency 97% MPPT
LED Chip	SMD 5050	Motion Sensor	PIR/Microwave Optional
LED Quantity	80PCS	Installation Height	6~12m
LED Lifetime	>100,000 hours	Operating Temp.	-40°C~+85°C
CRI	>78	Fixture materials	Aluminium Die Casting
CCT Range	2200K~6000K	Fixture color	Gray / Black
LiFePO4 Battery	25.6V 921WH	IP Rating	IP65
Battery Lifetime	4000 cycles @ D.0.D 50%	Dimension	1745*415*393mm
Solar Panel	133W 36V MONO	Net Weight	●
Solar Cells Efficiency	22.3%	CTN SIZE	●
Pole Diameter	60mm/76mm Optional	Warranty	5 years

ROBOT I 140W

DIMENSION
Unit: mm

393
459
48
1420
525
597
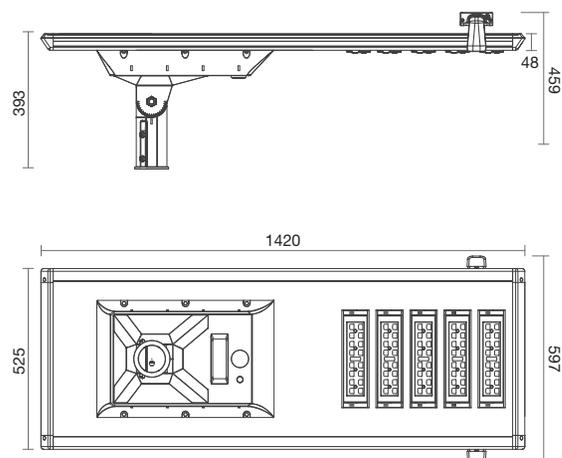
PARAMETER

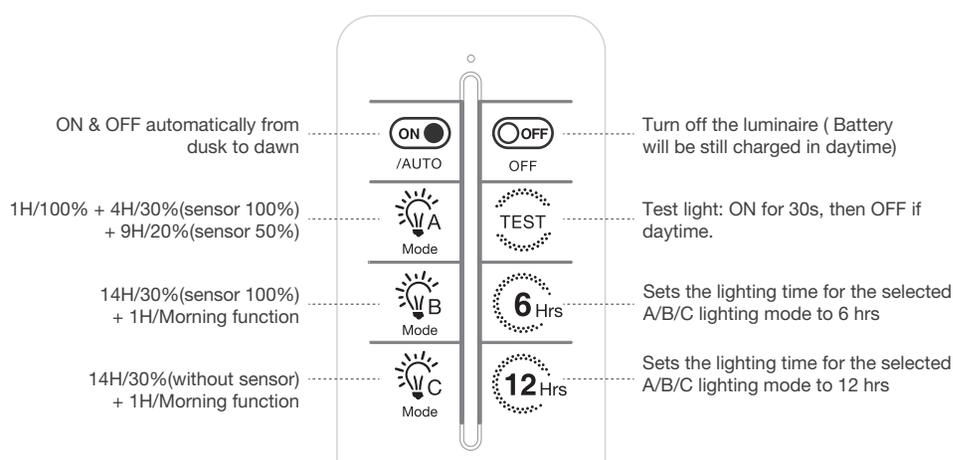|			
Model	TL-ROBOT-140	Cleaning Robot	Solar Panel 7W / Battery 43Wh
Luminous Flux	23,800lm	Cleaning Mode	3 Times Daily (4 Passes Each)
LED Power	140W	Solar Controller	High Efficiency 97% MPPT
LED Chip	SMD 5050	Motion Sensor	PIR/Microwave Optional
LED Quantity	80PCS	Installation Height	6~12m
LED Lifetime	>100,000 hours	Operating Temp.	-40°C~+85°C
CRI	>78	Fixture materials	Aluminium Die Casting
CCT Range	2200K~6000K	Fixture color	Gray / Black
LiFePO4 Battery	25.6V 1075WH	IP Rating	IP65
Battery Lifetime	4000 cycles @ D.0.D 50%	Dimension	1420*525*393mm
Solar Panel	●	Net Weight	●
Solar Cells Efficiency	22.3%	CTN SIZE	●
Pole Diameter	60mm/76mm Optional	Warranty	5 years

INSTALLATION METHOD

LIGHTING WORKING MODE

In addition to automatic switching on and off , you have the possibility of setting different lighting program easily by the simple remote control according to the needs of the project. Also you can set the light to work for 6 hours or 12 hours.

Mode A	1H 100% full power	4H/30%(sensor 100%)	9H/20%(sensor 50%)
Mode B	14H/30%(sensor 100%) + 1H/Morning function		
Mode C	14H/30%(without sensor) + 1H/Morning function		

Remote Control

ON & OFF automatically from dusk to dawn — **ON /AUTO**

OFF — Turn off the luminaire (Battery will be still charged in daytime)

1H/100% + 4H/30%(sensor 100%) + 9H/20%(sensor 50%) — **A Mode**

TEST — Test light: ON for 30s, then OFF if daytime.

14H/30%(sensor 100%) + 1H/Morning function — **B Mode**

6 Hrs — Sets the lighting time for the selected A/B/C lighting mode to 6 hrs

14H/30%(without sensor) + 1H/Morning function — **C Mode**

12 Hrs — Sets the lighting time for the selected A/B/C lighting mode to 12 hrs

Note :

1. Turn on switch button in the solar light before use.
2. Default lighting mode: A.
3. Modes A/B/C programs could be changed prior to notice, pls be subject to the sticker at backside of remote.
4. Press OFF to turn off light (Charging will be still functional), Press ON restores last setted mode.
5. 6Hrs/12Hrs : Set duration for current mode (A/B/C). Press mode button (A/B/C) again to reset to default time.

Hybrid System with 220V Grid Supply (Optional)

The solar street light with AC85~240VAC as backup power supply as backup is designed to ensure the solar lights more smarter and more reliable in very chanllenge conditions especially the area where the solar radition is not sufficienct during some months or in case of sudden bad weather for a few days.

The control system will automatically switch to AC power supply when the battery voltgae is dropping a a lot and no power in the battery. And it will switch battery power once the voltage of battery is recovered to full capacity. With hybrid system solution, it ensure the non-stop & reliable lighting service without worrying blackout at all during the whole year.

85~240VAC

FEATURES

High reliability

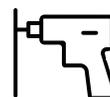Dual power supply guarantee, no risk of lighting interruption.

Energy saving

Give priority to the use of clean energy to reduce carbon emissions.

More economical

Reduce power consumption and low long-term use cost.

Flexible installation

Suitable for areas where solar energy resources are unstable or require high brightness.

IoT Smart Control Solutions (Optional)

Our solar street lights can be seamlessly integrated with advanced IoT communication modules, allowing each street light to automatically report key data such as operating status, battery health and solar power generation, while supporting remote switching, adaptive dimming and instant fault diagnosis.

Single light control

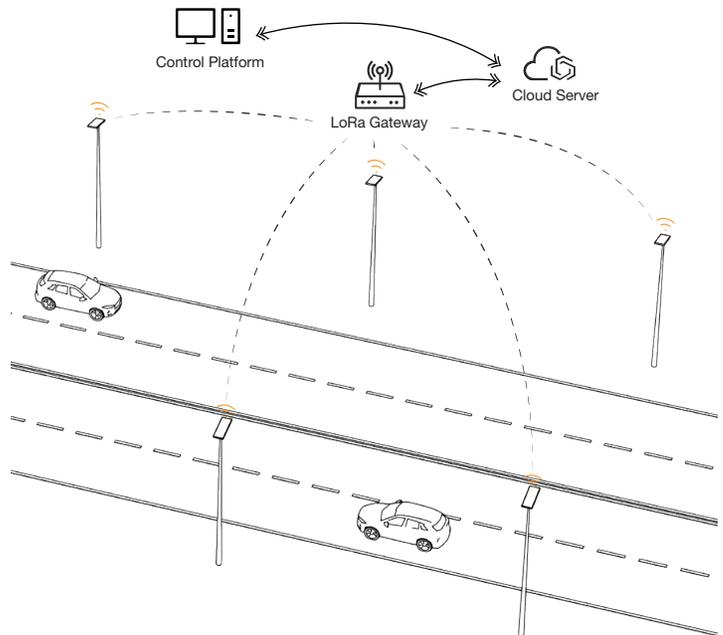**Wireless Network**

Malfunction management

Energy consumption analysis

Intelligent monitoring

LoRaWAN®

SMART CONTROL SOLUTION

Control Platform

Cloud Server

LoRa Gateway

Advantages

Ultra-low power consumption, ultra-long distance

4G Communication Network

SMART CONTROL SOLUTION

Control Platform

Cloud Server

Advantages

Fast speed, no gateway required, Ultra long distance, High connection stability