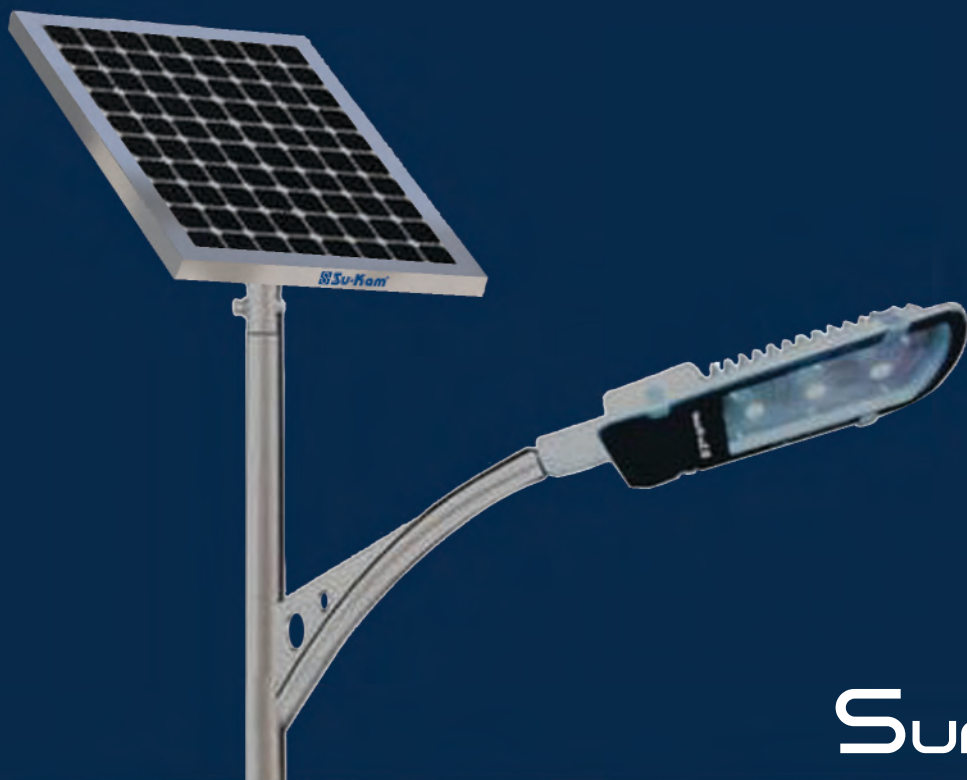


Su-Kam[®]
SOLAR

THE FUTURE IS HERE



SunWay

GSM SOLAR STREET LIGHT



Have you ever imagined controlling your street lights from the comfort of your home?

What you could have never imagined is today a reality. Su-Kam Solar brings to you a revolutionary new product – the SunWay GSM Enabled Solar Street Light with in-built lithium ion battery. This revolutionary new street light can be controlled and monitored via GSM network using an Android based application. The application is available on Google Play Store by the name of GSM Solar LI Streetlight. So, in whichever corner of the world you are, you can communicate to your street light.

Key Features

- **Freedom from installation problems**
- **Solar Power Operated**
- **Works even in cloudy weather conditions**
- **In-built Lithium Battery that negates battery theft**
- **GSM enabled – can be controlled from anywhere in the world**
- **Motion sensors that automatically adjust brightness**
- **Quick charging**
- **Up to 50% more brightness of light**
- **Great return on investment**
- **Low & easy maintenance**

Science

Fiction is

Now Science

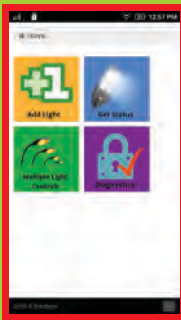


SunWay GSM Enabled Solar Street Wins All The Way

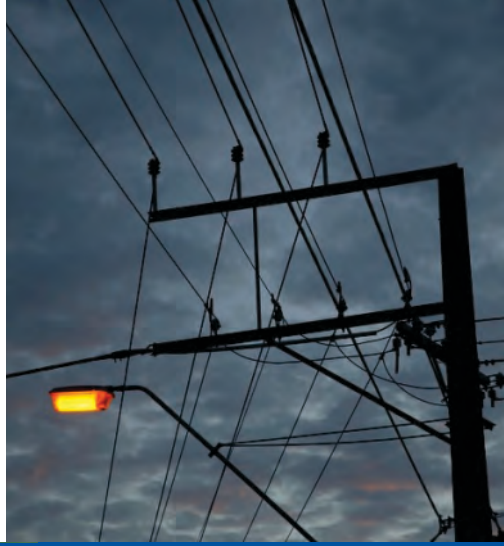


THE GSM ADVANTAGE

- Can be controlled via GSM network from anywhere in the world
- Application available in Google Store by the name of “GSM Solar LI Streetlight”.
- Remotely control the on/off/dimming of light
- The application displays status on battery capacity and provides runtime estimate
- Dimming level can be adjusted to prolong runtime
- Control as many as 50 Sunway street Lights
- Remote Diagnostics include checking state of system via data analytics including solar panel battery and LED voltages and currents
- Avoid a site visit to evaluate a complaint



Homepage | Diagnostics & Monitoring | ON / OFF / Dimming Control



THE SOLAR ADVANTAGE

Conventional Street Lights vs. Solar Street Lights

As the sun peeks over the horizon, it brings with it endless possibilities. It brings with it clean, green and sustainable energy. With global warming becoming a real threat, the sun presents a renewable source of energy that does not cause pollution. For these reasons, solar energy is gaining momentum globally.

This Solar Revolution is also fast extending to outdoor lighting. Solar powered street lighting systems are fast replacing the conventional grid based lighting. Apart from being power guzzlers, conventional street lighting systems have other disadvantages too. They

- Require expensive and time consuming grid layout
- Cause blackout during power outages
- Have high maintenance costs





THE LITHIUM ION BATTERY ADVANTAGE

Lithium Ion Battery vs. Lead Acid Battery

Most solar powered streetlights are equipped with lead acid batteries that come with a host of disadvantages. The introduction of Lithium-ion battery technology in outdoor solar lighting overcomes all the problems seen with grid and lead-acid based lights, providing the world with a hassle-free and desirable option.

Lithium Ion Battery	Lead Acid Battery
Low installation cost	High installation cost
Inbuilt prevents theft	Prone to theft
Efficient charging on cloudy days	Blackout on cloudy days
NO maintenance	Tubular requires regular maintenance SMF unsuitable for outdoor conditions





THE ADVANTAGES CONTINUE

Self-autonomy

- Battery gets partially charged even under cloudy conditions
- Short wire length between the solar panel and the battery/charge controller combined with the smart electronic design results in low idle currents (<10 microamps)
- Eliminates the need for bigger batteries to accommodate for loss of charging, as is the case with other solar lights

System Efficiency

- Combination of zero wire loss due to the inbuilt battery and low idle current leads to >92% system efficiency
- Combined with our world's best >150 lumen/W LEDs and special lenses
- Provides best in class lux levels with lowest power consumption

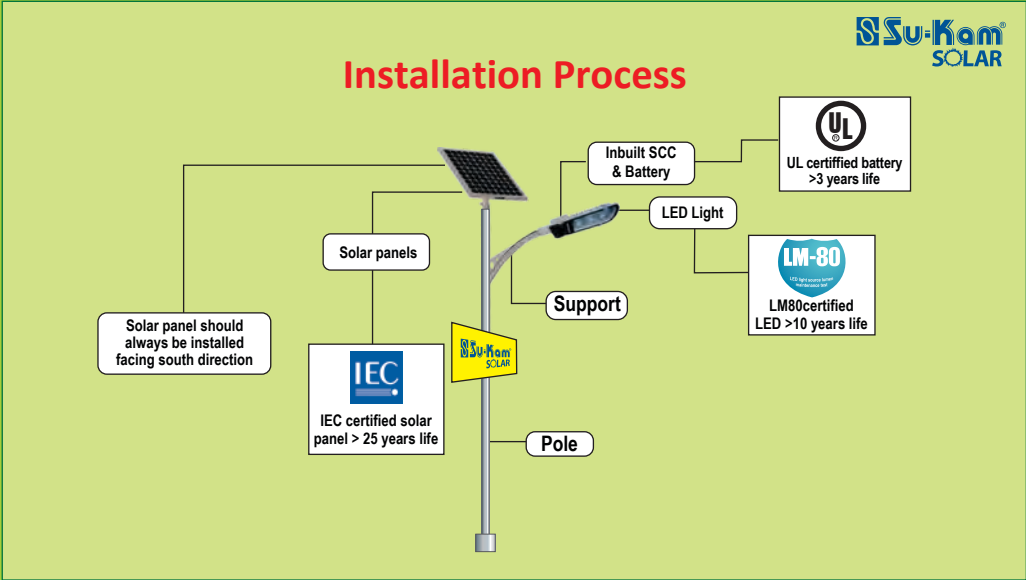
Aesthetics

- Use of reflectors and lenses add great aesthetic appeal
- Elimination of bulky battery boxes on the pole allows for the use of elegant poles, further improving the looks



Low Installation Cost

- Elimination of battery box and additional wires
- Lighter or no pole required
- Simple and fast installation with connectors
- Low transportation cost



Fast Charging

Solar Charging Cycle Test (spec. 6 hrs.) with 35W panel on 15W L13			
Time	Duration	Battery Voltage	Status
8 am	0 hrs.		Clear sky condition
10 am	2 hrs.	15.25	
11 am	3 hrs.	15.74	
12 noon	4 hrs.	16.34	
12:55 pm	4 hrs. 55 min.	16.76	Battery upper cut-off

The Lithium-ion battery takes less than 5 hours to charge on sunny days and has an inbuilt upper voltage cut-off to prevent overcharging. The ability to provide long life cycles even with fast charging is one of the key features of the Lithium-ion battery technology.

Dusk To Dawn Operation

- Runs for longer than 13 hours
- Automatic dimming feature based on battery voltage and state of charge
- Low voltage cut-off to prevent deep discharge

Lux and Run Time Laboratory Test on 15W L13				
Backup	Battery Voltage	Lux at 4 mts.	Dimming	Avg. Lux
0 hrs	16.50	36.4	3 hrs	35.1
30 min	15.96	35.9		
1 hrs	15.84	35.2		
1 hrs 30 min	15.62	34.8		
2 hrs	15.42	34.6		
3 hrs	15.12	34.0		
3 hrs 30 min	15.01	33.8	3.3 hrs	23.2
4 hrs	15.00	22.3		
4 hrs 30 min	14.01	21.3		
5 hrs	14.9	20.9		
6 hrs 15 min	14.87	16.8		
6 hrs 45 min	14.81	14.1	7 hrs	11
7 hrs 15 min	14.78	14.6		
7 hrs 45 min	14.72	14.2		
8 hrs 15 min	14.65	14.0		
8 hrs 45min	14.58	10.0		
9 hrs 15min	14.56	9.8		
9 hrs 45min	14.44	8.8		
10 hrs 15min	14.24	8.8		
10 hrs 45min	14.15	8.7		
11 hrs 15min	14.05	8.7		
11 hrs 45min	13.87	8.7		
12 hrs 15min	13.24	8.7		
12 hrs 45min	12.85	8.7		
13 hrs 15min	12.35	Battery cut off		

Reliability

- IEC certified solar panel with a life span of >25 years
- UL certified battery with a life span of >1000 cycles
- LM80 certified LED with a life span of >10years

Structural & Mechanical Advantages

- Built-in heat sink for thermal management
- Sulphur – free silicon gasket
- Toughened glass
- UL/IEC certified Polyamide PG9 gland

Electronics Technology

- Fire retardant (FR4) dimmer-based PCB
- Metal Coated Printed Circuit Board (MCPCB)LED and driver
- Buck-based driver design
- Intelligent Battery Management System (BMS)

Morning To Night Function

During Day Time :The battery charges through the solar panel and all LEDs are switched off.

During Evening : as the sun goes down, all the LEDs are switched on automatically, lighting up the area.

During Night : The moment motion sensors detect movement, all LEDs glow at 100% brightness. If there is NO MOVEMENT for more than 16 seconds, the LEDs will reduce to 33%, resulting in higher backup.

Models On Offer

Product Name	SunWay LI1	SunWay LI2	SunWay LI3	SunWay LI4	SunWay LI5	SunWay LI6
Rating (W)	4	9	15	30	40	50
Equivalent Local LED (W)	7 to 9	12 to 15	18 to 21	36 to 40	45 to 50	60 to 65
Peak Lux	12@4m	21@4m	31@4m	37@5m	37@6m	37@7m
No of LED	3	3	3	6	9	12
Dimming	NA	2 stage	3 stage	3 stage	3 stage	3 stage
Motion Sensor	NA	NA	NA	Yes	Yes	Yes
Battery (WH)	38.5	77	77	154	154	231
Solar Panel	14W	26W	35W	50W	60W	75W
GSM option	NA	NA	YES	YES	YES	NA



Your Investment Into The Future

With SunWay Street Lights, it is always a win – win situation. Added to all its technical advantages is the great Return On Investment it offers!

Key Specifications – 10x longer life on LED

System	Traditional	Li1	Li2
Power Consumption	48W	4W	9W
Lux* (at 4 meters)	19	12	21
IP Rating	54	65	65
Bulb Lifetime (Hours)	<5000	45000 - 55000	45000 - 55000

Low Upfront Cost – No underground or overhead cables

System	Cost of Cabling Per Pole+ Luminaire	Cost of Pole & Related Fittings	Cost of Luminaire	Total
Traditional	9000	3500	1850	14350
Li1	0	3500	9500	13000
Li2	-	3500	14000	17500

Lower Maintenance Cost (5 Years) – ZERO Electricity Bill

System	Luminaire	Battery*	Preventive Maintenance	Power	Total
Traditional	4500	0	8000	8500	21000
Li1	0	2500	7000	0	9500
Li2	0	5000	7000	0	12000

*3 years life

Summary – Immediate ROI : INR6000 to 13000 Savings Per Light Over 5 Years

System	Upfront Cost	Maintenance Cost	Cost of Ownership (5 Years)
Traditional	14350	21000	35350
Li1	13000	9500	22500
Li2	17500	12000	29500

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Application

The prolific SunWay GSM Enabled Solar Street Lighting System can be installed in housing societies, large and small campuses, villages – even those without grid electricity, perimeters, guesthouses...the possibilities are endless.



Hospital Campus



Village



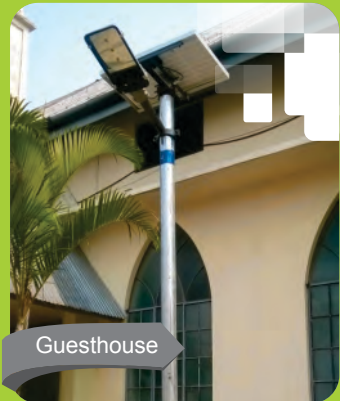
Perimeter



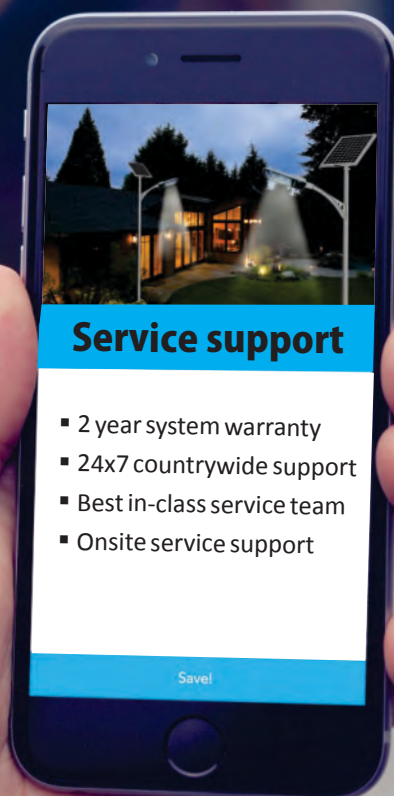
Streetlight



Hill House



Guesthouse





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