

# SOLAR LED STREET LIGHTING

## *Kamr L – G4 Range*

Wireless Remote Monitoring and Control  
Easy Installation, Long Service Life, Cost Effective

### The Multiple Benefits of Silicon CPV Solar Powered Street Lights:

- Looks like a normal street light with a specially designed light envelope
- Uses free electricity from the sun so environmentally-friendly and pollution-free
- Battery bank charge controller, LED driver, communication interface all in a single removable cartridge
- Lightweight – 18Kg to 26kg
- Easy to install and safe to use
- Computer-controlled EMS
- No costly or complicated pipe-laying or underground wiring required
- One unit so no separate battery
- Solar panel 25-year service life
- Special chemistry lithium - ion battery designed for 10-year service life in elevated temperatures
- Remote wireless connectivity
- No costly maintenance required
- Stylish and integrated design
- Suitable for 7 to 10-meter height poles
- Robust and weather-tolerant



### GSM or Internet based Remote management

Our vision is simple – to develop and manufacture advanced Solar LED Street Lighting systems that will greatly reduce the cost of generating clean electricity from the sun's energy.

Silicon CPV's solar powered street lights are the most economic, reliable and versatile means of providing street lighting.

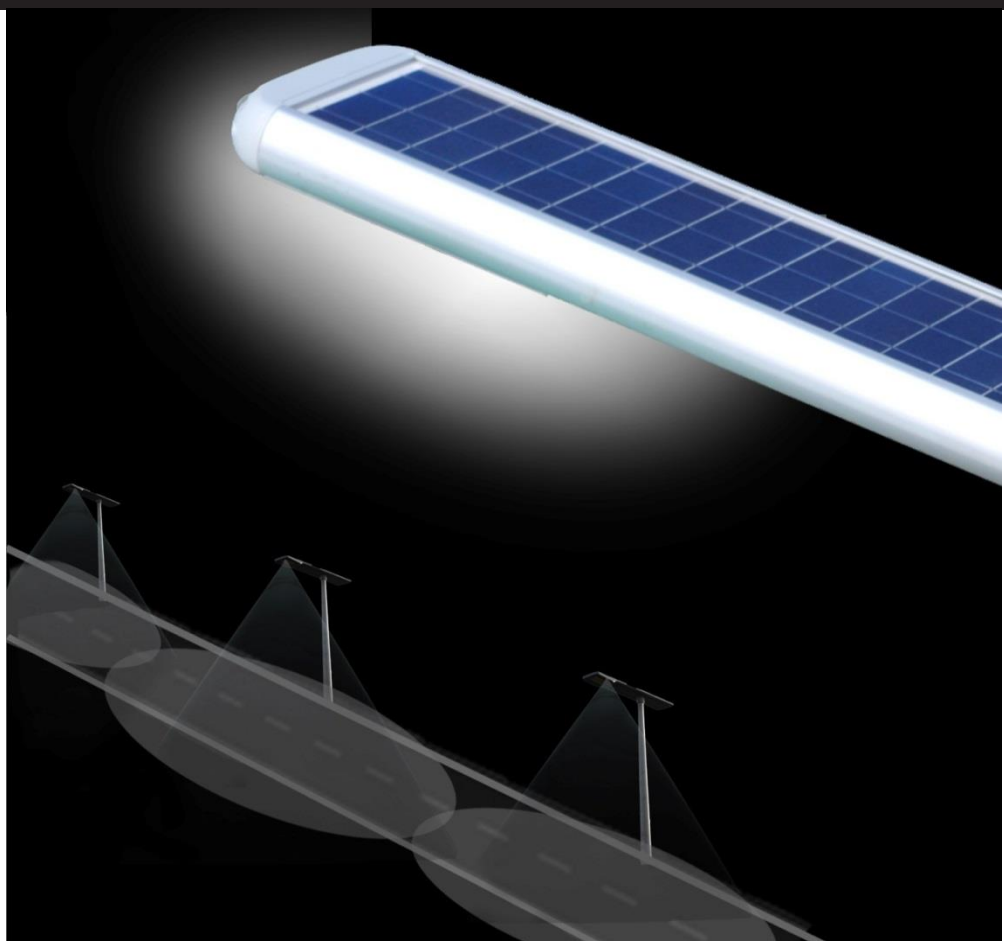
With a high efficiency long-life light source of up to 80,000 hours, the self-contained units are not only lightweight (less than 18kg per unit) but require no special tools or heavy lifting equipment to install. In fact, they literally take just five minutes to install!

The economic advantage of solar lighting is very clear – deploying a solar light requires no timely and often costly overhead or underground electrical wiring. Further, not having to provide additional electricity from the grid for lighting avoids the incredible expense of power plants and electrical distribution equipment.

The self-contained unit simply converts sunlight during the daytime into electricity and stores it into the battery. After sunset, the solar panel will detect a drop in ambient light and the system will automatically turn on the light. The LED light source complete with integrated lens ensures that all light produced is directed along the road exactly where required.

## Silicon CPVs street lights offer many advantages:

- Solar lighting can save the owners large amounts of money by eliminating trenching, wiring and electricity costs and also ensures that there are few or no landscaping issues.
- Compared to traditional grid-tied lighting, the solar LED lights do not require timers and their LED fixtures eliminate regular maintenance visits. In more remote places, solar lights are also a way to help prevent theft.
- Solar lights are good for the environment. Using only the limitless clean energy from the sun, they have the benefit of using less material and labour to install, further reducing the carbon footprint.



Specifications	Kamr L – G4	Kamr 2L – G4	Kamr 4L – G4
Maximum Light Output Phase 1 (Lumens)	7,400	10,600	15,800
Battery - Type	Lithium		
Capacity (Wh)	417	595	893
Battery - Service Life	10 Years at 65% DoD and at 45° ambient (Battery Warranty 5 years)		
Light Source - Type	High Efficiency LED, 5000K Colour Temperature (6500K optional)		
Total Light Output @ 65% DoD (Lumen Hrs)	54,163	77,376	116,064
Number of LEDs	128	160	192
Light Head Lifetime	80,000 to LM80 specifications		
LED Efficiency	200 lumens / Watt		
Optical Efficiency	>93%		
Main Body	Aluminum Alloy		
Solar Panel (W)	65W (No boosters)	135W (65W+2x35W)	195W (3x65W)
Solar Cells	Very High Efficiency – Proprietary Solar Cells		
Solar Panel - Service Life	25 Years		
Controller	Microprocessor based Energy Management and Wireless Communications		
Wireless Network	Proprietary Wireless Network allows Remote Management and Control of Lights using Internet or GSM. One gateway per 200 lights and all the gateways report to a central control room.		
Light Control	Intelligent Adaptive Light level control based on energy received or a predefined light level option is user selectable		
Light Hours	Programmable trigger levels from "Dusk to Dawn"		
Optics	8 different light profiles available for each light		
Recommended Pole Height	7	8	10
Pole Spacing	5 times Pole height for T2 Optics (IESNA Type II)		
Light Envelope (m <sup>2</sup> ) for T2 optics	245	320	605
Average Light level	10 - 20 Lux (dependent upon Road width and Pole height)		
Maximum Light Level	20 - 35 Lux (dependent upon Road width and Pole height)		
Minimum Light Level	5 - 10 Lux (dependent upon Road width and Pole height)		
Dimensions (L x W x H) cm	229 x 23 x 7 (Dimensions exclude pole adaptor)		
Weight (Kg)	18	21	26
Operating Temperature	-20°C to +60°C		
Protection Rating	Main Body and Battery IP66		
Standards Compliance	BS 5489:2003 EN13201, ME4a, IESNA Type II or Type III		