

# SOLAR LED STREET LIGHTING

## *Kamr –G4 Range*

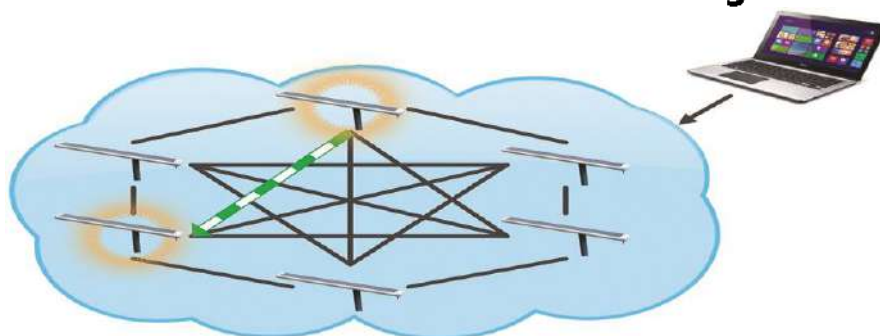
Wireless Remote Monitoring and Control  
Easy Installation, long Service life, cost effective

### Benefits of Silicon CPV Solar 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 – Lights range from 5kg to 16kg
- Easy to install and safe to use
- Computer-controlled EMS
- No costly or complicated pipe-laying or underground wiring required
- No cabling required
- One unit so no separate battery
- Solar panel 25 year service life
- Special chemistry lithium - ion battery designed for 8 year service life in elevated temperatures
- Remote wireless connectivity
- No costly maintenance required
- Stylish and integrated design
- Suitable from 4 to 6 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.

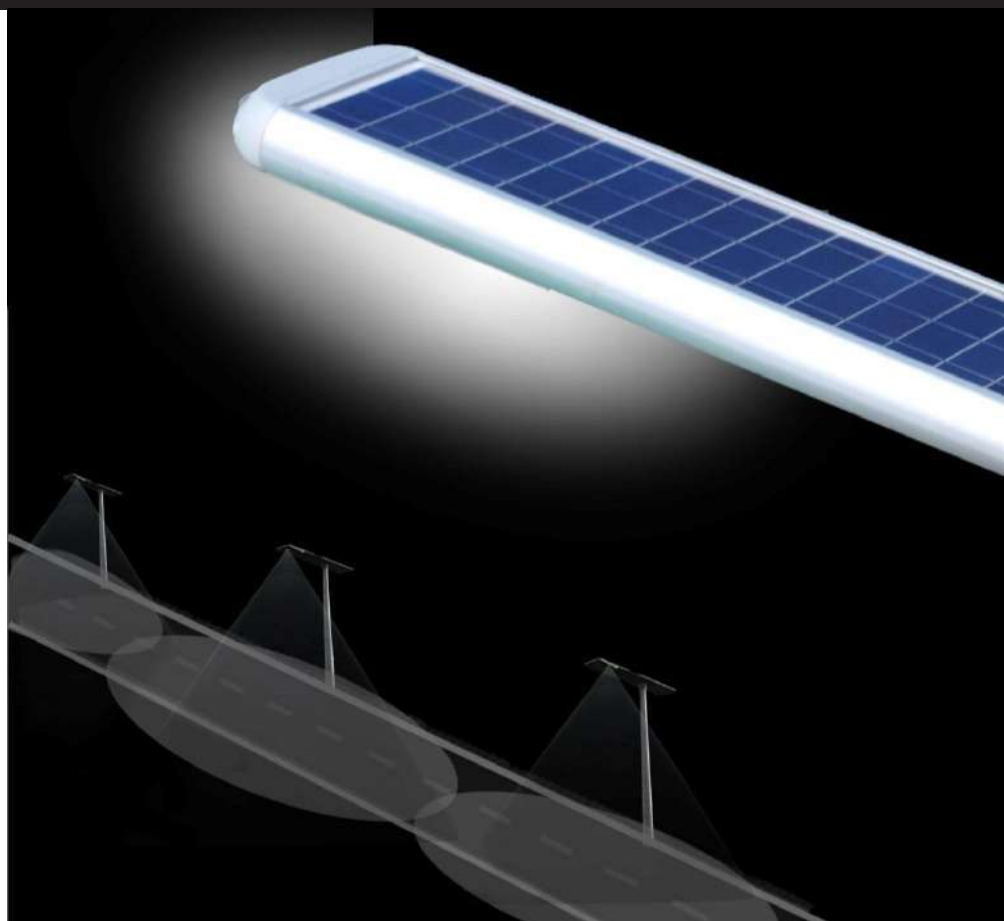
With a high efficiency long-life light source of up to 80,000 hours, the self-contained units are not only lightweight (from 5kg to 16kg per unit) but require no special tools or heavy lifting equipment to install. In fact they literally take just five minutes to install!

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 lighting solution offers 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 3-G4	Kamr 2-G4	Kamr 1-G4
Maximum Light Output Phase 1 (Lumens)	2,200	4,300	5,400
Battery – Type	Lithium		
Capacity (Wh)	119	238	298
Battery - Service Life	8 Years at 75% DoD and at 45° ambient		
Light Source – Type	High Efficiency LED, 4000K Colour Temperature		
Total Light Output (Lumen Hours) @ 65%	15,862	31,724	39,655
Number of LEDs	32	64	96
Light Head Lifetime	80,000hrs to LM80 specifications		
LED Efficiency	200 lumens /Watt		
Optical Efficiency	>93%		
Main Body	Aluminum Alloy		
Solar Panel (W)	27	41	54
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 user selectable light level		
Light Hours	Programmable trigger levels from “Dusk to Dawn”		
Optics	Option for 8 different light profiles available for each light		
Recommended Pole Height	4 meters	5 meters	6 meters
Pole Spacing	5 times Pole height for T2 Optics (IESNA Type II)		
Light Envelope (m <sup>2</sup> ) for T2 optics	180	245	320
Average Light level	16 Lux		
Maximum Light Level	30 Lux		
Minimum Light Level	10 Lux		
Dimensions (L x W x H) cm (excluding	136 x 23 x 7	180 x 23 x 7	228 x 23 x 7
Weight (Kg)	10	13	16
Operating Temperature	-20°C to +60°C		
Protection Rating	IP66		
Standards Compliance	BS 5489:2003 EN13201, ME4a, IESNA Type II or Type III		