

*Solar panel 40W 16
Volt output*



*Lamp unit with
E27 socket*



Converter module



*Lamp unit with housing
and reflector*

Features of solar lamp system SL23 W

- * 100 000 hours operation life time (about 25 years normal operation)
- * High efficiency plasma lamp in operation with 80 Lumen / W in efficiency
- * 23 W electrical input corresponding to a 300W halogen lamp in illumination visibility
- * Solar panel with 40W electrical output with battery charger for 12 V car batteries
- * Battery and lamp controller admitting fully automatic operation
- * Plug and shine operation with easiest possible installation and almost no maintenance
- * Powerful indoor operation by manual control or out door operation by automatic light switch
- * Low life cycle cost and no needs for electrical back up in sunny areas

Laseroptronix is happy to offer this unique illumination solution based on high efficiency plasma lamps and a plug and shine operation. The lamp is a new type of high efficiency Plasma lamp with no electrodes or sensitive components. This admits a typical 100 000 hours life time with no service. In normal operation this corresponds to about 25 years operation.

The system have a solar panel of powerful 40W output made in glass. This have a very long life time and needs no extra service except cleaning window now and then.

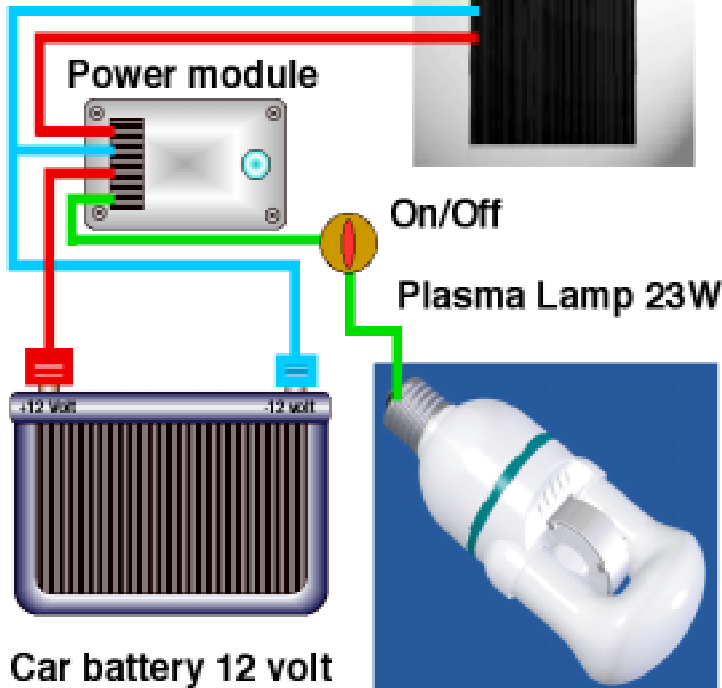
Converter module connects and controls all and see battery is fully charged. It can automatically start the lamp when dark and turn it off when sun is up. Lamps can also be manually controlled. The battery protector circuits see the battery is not to discharged to much.

Many of our products are protected by patents and patent applications

Document Solarlamp SL23W 0511



Solar panel 40W



Car battery 12 volt

Indoor application

The solar panel is out door pointed to the sun. It gives powerful 40W at 16 volt. The lamps are indoor and connected by cables.

Normal on + off switch and cables are used from local source

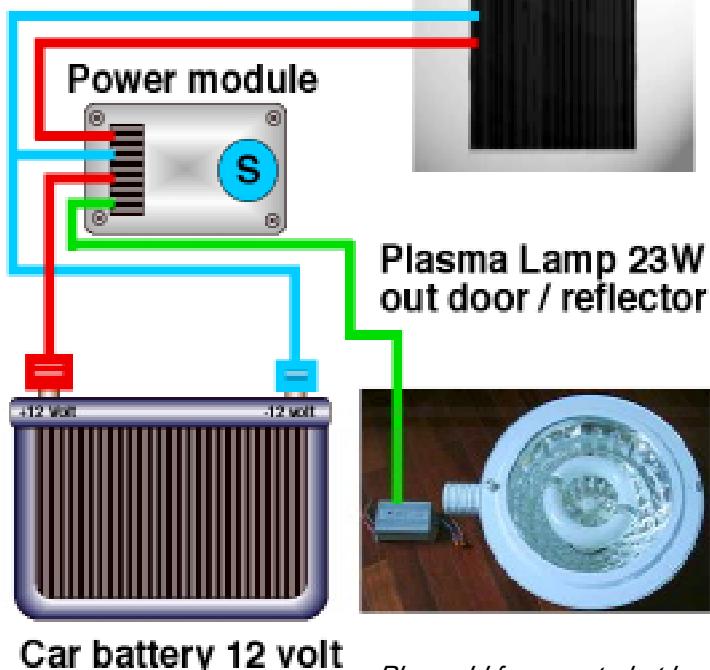
The power module control all and se the lamp have correct voltages and current The battery is a normal car battery of 12 Volt 60-110 AH. Better are lead batteries optimized for low current operation (very common in most areas.

The lamp can operate over 15 hours on one battery and still have margins left. This gives a far longer life time of batteries compared to a deep discharge. 10 hours of sun gives more than enough to fill the battery once again.

This is a typical lamp for common areas where people have the main activities. Schools and hospitals in remote area have the solution here.



Solar panel 40W



Car battery 12 volt

Out door application Plasma lamps

The installation is like indoor application with some differences

The power module have a solar cell starting the lamp when it is dark. The lamp is turned off when the sun is up. This is 100 % automatic and works for years with no service except battery checks now and then.

Car batteries works for 3-5 Years. Back up batteries works for typical 10 years but are far more costly.

The lamp housing have a mirror reflector to get all light going down and not up in trees. This gives a far better illumination in areas like road crossings and squares.

In booth cases we use local made cables and electrical parts.

Plsw add fuse central at best location

Solar panel specifications

Power 40W at 16 volt output measured at full sun at 1000 W / square meter in sun flux

Thin film solar cell technology

Dimensions 25 in x 49 in. (63.5 cm x 124.5 cm)

Thickness 6 mm + frame

Weight 27 lbs. (12.3 kg) ex packing

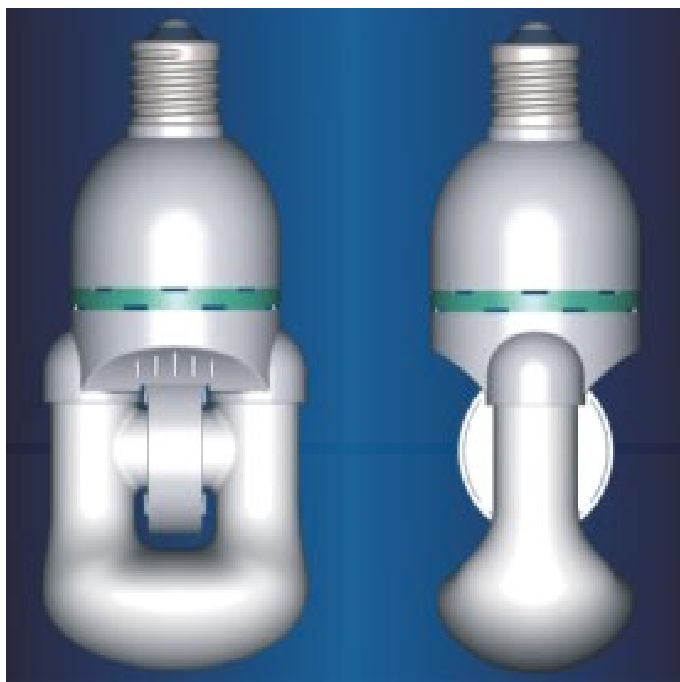
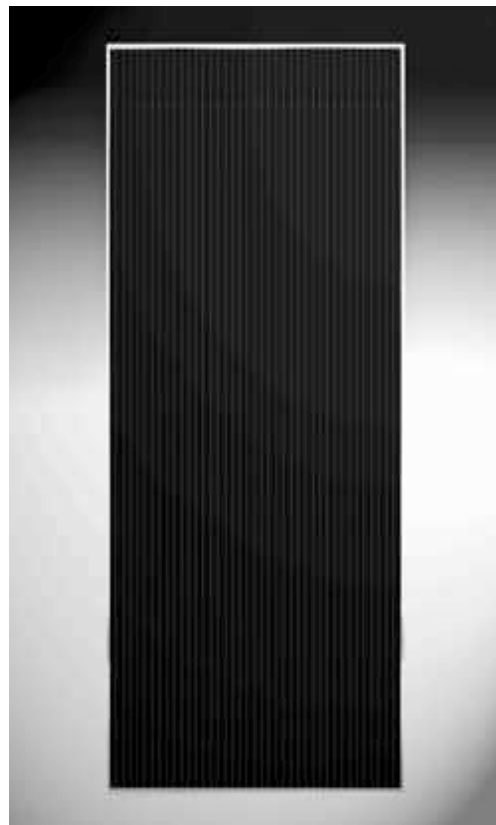
Approval IEC) 61646 tests

Test Certificate 04072801SE

Glass windows with sealed edges

Mounting hard ware can be found locally in most hard ware shops.

This is a rather large panel to see the battery charging always is good enough. Cloudy days can reduce efficiency a lot so margins are needed.



23 W plasma Lamp with E 27 socket

E27 standard socket Edison type

Operating voltage from 90 VDC

Life time typical 100 000 hours

Efficiency over 80 Lumen / Watt

Colour temperature 3200 Degree C

This is the typical indoor solution with a E27 socket adapter

Cables and connectors are same as standard 110/230 volt electrical power systems. These can be bought locally

Lamp housing with lamp installed

Integrated 23 W Plasma lamp unit

Specifications of lamp same as the other model in this paper

Plastic lamp housing for out door applications

IP 54 encapsulation level

Mirror reflector reflecting light down and no light going up

Protection window

Mounting hardware can be found locally.

Cables and extras same as any 110-230 Volt installation



Technical details about the SL23W solar lamp solution

This solution offers a great step ahead better illumination. Lamps and illumination is often less efficient and needs a lot of service.

Plasma lamps have no electrodes or filaments which are worn out. It use a gas mixture and a Radio transmitter to excite the gas which glows and give the visible light.

The heat is far lower than Incadensent or Halogen lamps and none will burn the fingers on the glass envelope. Solid state radio transmitter needs no maintenance.

The optical spectra is very good and there are almost no IR and UV light so all what comes out is visible for the eye. Lamps are certified and follows the CE directories and EN norms.

The lamp operates at about 90 Volt DC and the convert see the lamp operate from the batteries for many years. The module have a low voltage function to protect the batteries.

Solar cells are standard cells based on thin film technology. Then needs close to zero in maintenance except for cleaning now and then. Estimated life time is 20 years or more.

The system used for out door solutions have a sun switch which turn on and off the Plasma lamp.

Batteries can be any good car battery. We propose the standard car batteries of 12 volt and between 55-110 AH. They are used in most cars and smaller trucks.

Larger battery is always better .Discharging is less deep with larger battery. Car batteries last for typical 3-5 years. When we use special batteries they can work for over 10 years but they are several times more expensive than the car battery.

SL 23W-IN is the solution for indoor application includes following

Plasma lamp with E 27 socket

Power module with screw connector at out side

Solar cell of 40W power

Weight about 20 Kg

All in one box

SL23W- OD is the out door system includes following

Lamp housing with 23 W plasma lamp

Power module with scree connector at out side

Light switch operating at sun light turning the system on and off

Solar cell of 40W power

Weight about 25 Kg

All in one box

Local equipment like mechanical hardware, cables fuse box,, switch etc. and standard 120/230 Volt parts. Max voltage is 90 Volt DC anywhere in the system.

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