

Solar LED Lighting

Public Parks, Streets, Car Parks Gardens and others

Sustainable illumination Solutions!

- *Brighter*
- *Longer Lasting*
- *Lower Cost*

Photovoltaic Solar with LED lighting marks an important turning point when it comes to self contained lighting system .

Introducing new standards of :

- Efficiency
- Reliability
- And
- Running Economy



Solar Park Lighting:

- *Elegant Design*
- *Gentle on the eye—No glare*
- *Total absence of light pollution*
- *The average life prior to a failure about 100,000 hours*
- *Maintenance Free LED designed to last 15 years or more*
- *Operate Automatically - Timer Programmed to turn on and off*
- *Local warranty and back up service*
- *Designed and Manufactured in Australia*



We can design types and levels of lighting with certification - to meet Australian lighting Standards for roads, parks including car parks, and other applications

Public Park Beautification Project



Solar Park Lighting:

“Self-contained photovoltaic street lighting kit”.

The photovoltaic kit is designed for the illumination of car parks, roads, public gardens, parks and thoroughfares

*New Model and Elegant Design
Gentle on the eye—NO Glare*

Emits a white light with equal illumination thus allowing the human eye to perceive colours and details in a much better way.

- Guaranteed ignition throughout the night
 - One-way light emission, thus a total absence of light pollution
 - The surface is illuminated to a greater extent
- Compared to low pressure sodium vapour lamps of equal power usage.
- Longer lasting than any type of filament or gaseous discharge lamp. The average life prior to a failure (MTBF) is about 100,000 hours
 - Very highly reliable, since the light source is formed by lots of independent units
 - The luminous power can be adjusted
 - The system is not affected by ambient temperature, so there is no difficulty in turning on the lamps in colder climates.



Narrow Head Option available for areas needing a more focussed light

LUMINAIRE FEATURES

- White light emission closer to the natural human eye perception of colours and detail.
- Narrower light beam can be directed to illuminate only wanted areas significantly reducing spill to residential areas and skywards.
- Longer lasting than any other filament or gaseous discharge lamp. The average mean time between failures (MTBF) is 100,000 hours.
- The LEDs are mounted on an oversized aluminium heat sink guarantees continuous operation with nearly imperceptible rise in temperature.
- Exceptionally reliable in regions with rigid winter conditions as the ignition of the lamp is not affected by colder climates.
- Very reliable light source made up of an array of diodes each representing an independent luminous unit.
- Lamp casing is IP 65 norms, Standards CEI 34-21

Slim Head design is ideal for areas that require more focused Light

Retro Fitting - Fit LED Heads to exiting Public Park, Street and other lights

Replace your existing energy hungry sodium vapour lights with -

- *Highly efficient*
- *long lasting 100,000 hours maintenance FREE LEDs*
- *Highly Reliable*
- *Brighter*
- *Ignition is NOT affected by cold temperatures.*



- *Unlike compact Florescent LED lights Ignite straight away and DO NOT fade over time*
- *We can design, build and supply lights to meet your specific requirements*

Description and Specification

Electronic control and monitoring circuit

- Charge regulator
- Protection against complete battery discharge
- Dusk to dawn switch.
- The electronic monitoring circuit detects the installation data and ensures that the streetlight functions in a reliable and fully automatic way. There are no relays in the control unit. All commutations take place with solidstate components. During the day, a power mosfet connects the panels to the storage battery, the voltage of which is kept continuously under control. When the voltage is sufficient to ensure that the storage system completely recharges, the mosfet disconnects the solar panels to prevent the storage battery from being damaged by an overload. At dusk, a dusk to dawn switch enables the igniter which generates the alternate voltage able to power the lamp.

The length of time the lamp remains on is determined by a programmable timer in the electronic monitoring circuit. The streetlight comes on each evening at dusk and is turned off after the required number of preset hours have elapsed. Moreover, a threshold circuit keeps the powering voltage under constant control overnight. If this drops below 11 V owing to a fault or a long period of bad weather, the lamp is turned off to prevent the storage battery from discharging completely as it could sustain irreversible damage if this were to occur. The control unit is covered by a 12-month warranty from the installation date.

Solar Cell Panels

The electric energy is produced by photovoltaic solar panels formed by highly efficient single-crystal silicon.

- The technology used for the high-efficiency solar cell panels produces much more current (10-17%) than the typical operating voltage of a battery (12-13 Volts).
- Designed to function in the most difficult environmental and operating conditions, the solar cell panels have proved to be extremely tough and long-lasting (more than 30 years on average).
- They comply with standards IEC 1215 and EN 61215, Class II equipment.

Light fitting

The structure of the light fitting comprises:

- Casing and reflector made of aluminium
- Cover - grey coloured (RAL 7035) shockproof polycarbonate, stabilized against deterioration caused by UV radiation
- Front cap - the structure is protected at the front by flat glass. This is fixed to the light fitting by strong hinges that allow the unit to be serviced without the cap having to be removed. The cap is closed by three stainless steel clips and a seal, ensuring that the lamp compartment is perfectly tight
- 12 Vdc power supply. An easily removable powering plate contains the electrical equipment, which comprises an electronic control and monitoring circuit and a high frequency electronic reactor
- IP 65 norms; Standards CEI 34-21 - IP 23 Electrical compartment.

Battery housing

Cabinet at the base of the pole or in an underground well, depending on the type of installation.

Fixing structure of the photovoltaic modules

The photovoltaic modules are fixed by means of a hot-dip galvanized steel section metal structure with pole top connection .

Lamp, panel and control units are normally installed on a hot-dip galvanized pole. Height 7 meters—8 meters above ground. Lamp installed at a height of 5 - 6 meters.

Arm for street armature

In hot-dip galvanized steel. Collar for fixing to 60 to 89 mm diameter poles.

Storage battery

The storage battery specifications are listed below

- 2 V voltage rating and 144 Ah/20h capacity
- suitable for photovoltaic applications
- Maintenance-free
- Low auto-discharge
 - Able to carry out charging/discharging cycles in accordance with standard IEC 896 part 2
 - Dimensions 342 x 172 x h. 285 mm
 - 12-month warranty from installation date

Since the daily charging/discharging cycles in photovoltaic pole applications are less than 1/4 of the capacity, the working life of the storage battery can be as long as 5-6 years.

Thanks to the technical methods and materials used, this product is the ideal solution for installations designed to supply energy for systems requiring high performance, the utmost reliability and small size.

Product Certifications

- All production complies with the quality international standard ISO 9001-2000 and, according to the type of product, they comply with CEE, CEI, BT, EMC and UNI international standards.
Original certificates shall be made available upon request.

- We work closely with our local manufacturer and are able to provide products specifically designed to meet clients specific needs.
- Please note that the research and development team is constantly working to exploit advancements in technology and offer the best quality and durable products.
- This brochure is only an information tool.
- Your needs will be assessed and lighting will be designed to meet your specific requirements.



**Frontier Electrical &
Solar Solutions**

**For more information please
contact |**

Email:

Admin@solarforyou.com.au

Web: www.Solarforyou.com.au

Contacts:

James Shaw 0400 782 260

Annie Shaw 0425 246 874

Address: P.O Box 284,
Macarthur Square, NSW 2560

We are an Australian company working in association with other Australian sustainable energy companies to provide you with best products and services designed to meet your needs. We can provide "Tailor Made Solutions" with engineers certifications for your specific requirements.