

Associated Response
in conjunction with its
solar technology
partner have developed
a unique solution to
solar energy
landscape lighting.

The 'hooRay™'
clip-on solar light
has been designed
for durability,
effectiveness and
easy installation.

Features include
certified, guaranteed
components that fit
together and assemble
at the top of a
supporting post making
this system compact
and out of reach
from tampering.

The 'hooRay™' is the
solution for instant
landscape; street;
perimeter illumination
and off-grid areas.
Also ideal for disaster
prone areas around
the globe.



our response to your solar ↕



associatedresponse

solution

HR-PG1-FEB2010

product information

COMPONENTS and SPECIFICATIONS:

Battery (12V): Gel deep cycle which can handle extreme high temperatures and high depth of discharge. *Expectancy Life: 5 - 7 years.*

High quality PV Solar Module. *Expectancy Life: 25 years.*

Light fixtures: 9W (Ray9) (CREE chip) 150pcs LED.

Lamp Luminous Flux: 750lm. *Expectancy Life: 50 000hrs.*
warm white: 2200-3500K; pure white: 3500-5500K; cool white: 5500-7500K.
30W (Ray30) (CREE chip) 24pcs LED.

Lamp Luminous Flux: 1950lm. *Expectancy Life: 30 000hrs.*
48W (Ray48) (CREE chip) 48pcs LED.

Lamp Luminous Flux: 4320lm. *Expectancy Life: 50 000hrs.*

LED lamp: Aluminium casting. Tempered Glass. IP65.

Controller: overcharge and undercharge protection.

Automatic built-in day night sensor.

Metal components either galvanized or powder-coated.

Supply factories are ISO9000 certified and parts CE, IP65 attested.

Warranty: 2 years.

FAQ's:

What are the benefits of using *hooRay™* clip-on solar light in comparison to conventional sodium lights and other solar lighting systems available? Solar energy is renewable making the *hooRay™* clip-on solar lighting systems entirely 'green' and environmentally friendly; efficient lighting with low carbon demands! This method of lighting requires no electricity so no running costs and underground cables. *hooRay™* is also unique compared to other solar lighting systems as comprises quality, guaranteed components that work efficiently in high outdoor temperatures, has a compact design and extremely easy to install at the top of a post giving instant light.

What solar lighting systems are available from *hooRay™*? There are three main options available by *hooRay™*. First option is the *Ray9* which has a 9W LED lamp, the other the *Ray30*, which has a 30W LED lamp and the third, the *Ray48* which has a 48W LED lamp. Other systems can be designed for different applications on request.

What is the difference between the systems on offer? Main difference between the three is the size of the illuminated area produced from the LED lamp. The *Ray9* (9W LED lamp) is designed for small areas like perimeter and security lighting. The *Ray30* (30W LED lamp) and *Ray48* (48W LED lamp) suits larger areas like streets, car parking areas and other large public areas.

What is the recommended height for the supporting post for the different systems and what size area will be illuminated? It is recommended for the *Ray9* the post be 4 metres in height, the *Ray30*: 5 - 6 metres in height and the *Ray48*: 7 - 8 metres in height. These post heights will maximise on the illuminated area achievable. The *Ray9* will illuminate 30m², the *Ray30* will light 100m², and the *Ray48* will light 240m² at the post heights suggested. The 9W LED is equivalent to a 18W fluorescent lamp, the 30W is a 50W sodium halide equivalent and the 48W equivalent to 75W sodium halide lamp.

What are the advantages of LED light compared to ordinary sodium light? LED lamps are designed to outlive any other lamp. Life is approximately 50 000 hours compared to 10 000 hours with conventional lighting. An estimated 50% reduction in overall carbon emissions is another positive for LED. Other important factors to consider are that LED lamps use 60% less power than ordinary lamps and produce no heat, attract no insects and generate no noise. Conventional sodium lights produce a lot of excess light that is glaring to the eye, whilst LED lamps projects illumination towards the subject only, ie. street lanes.

What quality of batteries are supplied with the systems and is there back-up energy incase of overcast days? The *hooRay™* systems are supplied with gel deep cycle batteries which are the most efficient, long-life battery suiting use in high outdoor temperatures. Batteries supplied have enough energy back-up for 24 hours continuous use.

Is the solar module (panel) and lamp in a fixed position or can it be adjusted? Yes, both module (panel) and lamp is fully adjustable so you can capture direction of sun with the module and then illuminate the desired area with the lamp.

What are the specifications for the supporting post? All systems can be attached to a post with a top carrying capacity of 60kg and a top diameter from 80mm - 120mm.

Does the *hooRay™* suit external harsh weather conditions? Yes, components used are globally certified, guaranteed and can withstand high outdoor temperatures. Also designed to withstand hail and wind pressure.

Does the light on the *hooRay™* need to be turned on at night? No, the system has a built-in day night switch so the light will turn on automatically when the sun sets and turns off when the sun rises.

Can the *hooRay™* be adapted with motion sensor and siren for security purposes? Yes, our systems can be modified to suit perimeters where security is crucial. The system is triggered by motion which activates the LED lamp and siren, drawing attention to the intruder.

Does system require maintenance: The *hooRay™* is low maintenance and only cleaning of the solar module needs to be done. It has been proven that a 7% drop in charge, per annum, will occur if the module is not kept clean of dust.

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