

ECOTREKKA 400



SOLAR MOBILE LIGHTING TOWERS BY PLG

At PLG we manufacture our towers from the design stage through to fabrication, electrical and assembly. All our Solar Mobile Lighting towers are made in Victoria Australia to the highest standards. With our fabrication facilities we are able to include or customised accessories for your desired performance or requirements. The EcoTrekka 400 has exceptional Light output without the initial cost, fuel, unreliability, running noise and maintenance needed on traditional Lighting Towers. Designed for continuous night work in a wide range of applications including Mining, Road works, Construction, Hazard illumination, Remote area lighting, Civil works, Agriculture and Events.



ITEM	DESCRIPTION
SOLAR PANEL	3x 300w monocrystalline silicon tempered glass
POWER STORAGE	6x 200A hour deep cycle solar storage batteries. Optional 240V charger
RUNNING TIME	40 Hour battery supply on Zero charge
LAMP	4x100w LED lights
MAST	Manual Electronic 5.5 meters.
TRAILER	Single axle, LED Tail lights, Fork lift pockets, road ready, Customisable to your needs. For heavy duty applications we recommend independent suspension as an option.

FEATURES

- High performance LED's- 140Lm/W
- Super bright colour rendering 6000K with 80-100 meter radius light coverage
- Low working temperature, making them reliable and safe
- Runs at 24V Therefore removes the risk of high voltage electrocution
- Highly efficient Monocrystalline Solar Panel
- Australian made quality parts

BENEFITS

- No need to refuel
- No running noise
- Simple operation
- LED Luminaires have a long life of over 50,000 hours

SAFETY

Less chemical contact and less environmental risk and damage
No pneumatics resulting in a reduction of an injection injury
Less operator interaction with machinery



ECOTREKKA 400

MAIN TECHNICAL PARAMENTER

POWER STORAGE	
Power storage	6x 200A hour deep cycle solar storage batteries maintenance free
Running time available	40+ hours at zero charge
LIGHT SOURCE	
Lamps	4x100w LED Flood Lights. Light area covers 80-100 meters
Light Body & Lamp shade material	Aluminium Housing & Tempered Glass
Working Temperature Lamp	40- ~ 55+
Lamp IP Rating	IP 65
Colour temperature	Pure white 5500-6500K, Cool white 6000K– 7000K
Light output	LED efficiency: 130-140m/W 85,000 Lm
Light life time	< 50,000 hours
MAST	
Electromechanical	Simple push button operation
Mast height	5.5 meters including lights and mounting system 6 meters
CONTROL SYSTEM	
Controller	Manual ON/OFF Switch or Solar controller; automatically turns on at dark and run for a full night. Or adjustable timer to desired light requirements.
BODY	
Control box: lockable enclosure for electronics with vibration protection	
Louvre's for ventilation	
High quality steel and materials for strength and long life	
TRAILER	
5 or 6 stud Toyota Landcruiser stud pattern 16 inch rim as an option	
Single Axle trailer- Road ready	
Suspension- Standard Road Requirements	
LED tail lights	
4x manually operated supports and Heavy duty Jockey Wheel	

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PHOTOVOLTAIC LIGHTING GROUP

Factory Address: 3, 5/7 Hogan court, Pakenham, VIC, 3810 Phone: +61 (03) 5940 3615 Web: www.plgintercorp.com





SOLAR POWER

PLG solar energy lighting towers use highly effective monocrystalline silicon solar cell power to supply energy. As the name suggests mono-crystalline solar panels are made of a single silicon wafer per cell. They are the oldest technology, and even under weak light, the solar modules can produce maximum power output. These can get 21% efficiency in the real world.

LIGHT/PANEL	PEAK POWER (Wp)	Vmax (V)	I _{max} (A)	Voc. (V)	I _{sc} . (A)
3X 300W panel	300W	36	8.33	40.32	9.33

BENEFITS

- Mono-crystalline technology is the most tried and tested technology with minimal degradation of panel of 0.15% every year.
- Reduce gas emissions- and future increase in Fuel cost
- Lower maintenance than a generator powered lighting tower



CHARACTERISTICS OF PANEL

- BOSCH technology silicon cells are the highest quality; the cell's performance is improved under weak lighting conditions and increased ambient temperatures. This means a higher energy yield for solar consumers even during winter months or overcast days.
- Panels mounted at 35 degree angle for optimal light efficiency and fold away for transport.
- Simplified panel mounting system, providing a more reliable and cost effective setup

CHARACTERISTICS OF CONTROL SYSTEM

- The controller charging process has been optimized for long battery life and improved system performance. Peak conversion efficiency of 97 %, high Tracking efficiency of 99%.

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POWER STORAGE

Maintenance free– Sealed Deep cycle batteries.

Optional 6– 10 Batteries

6 batteries 200Ah connected to provide 600Ah battery capacity at 24v

8 batteries 200Ah connected to provide 800Ah battery capacity at 24v

10 batteries 200Ah connected to provide 1000Ah battery capacity at 24v

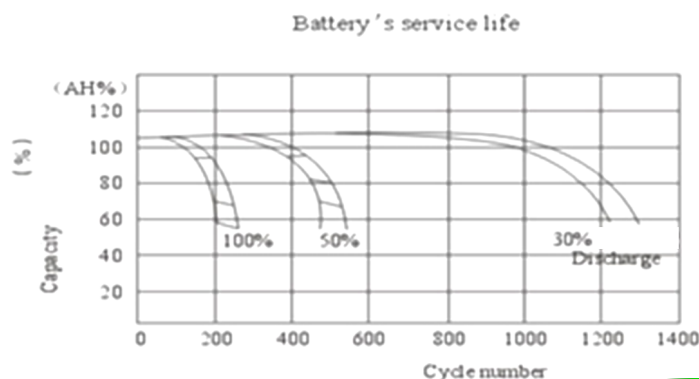
BENEFITS

- Cost savings due to low maintenance
- No Fuel required.



CHARACTERISTICS

- Deep cycle batteries offer high performance, long service life and lowest maintenance cost, therefore are an economical product compared to generator power.
- Maintenance free– Sealed Batteries
- The batteries offer a wide operating temperature range of -25°C ~ 50°C
- Long Cycle Life
- Case material is ABS plastic.



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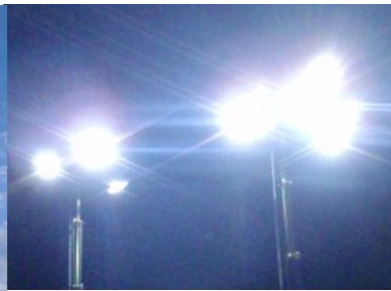
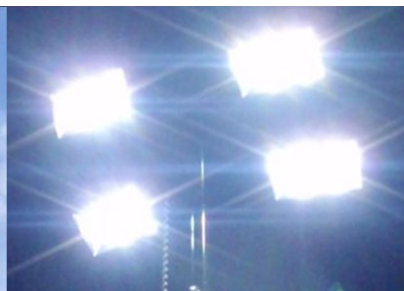
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LIGHT SOURCE

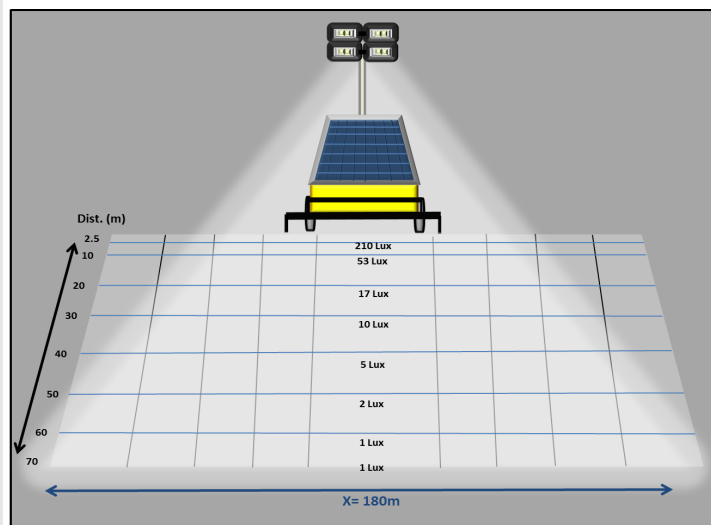
PLG lamps are made with the latest reflective technology and use American Bridgelux high- power LEDs. High quality mounts are easy to move for desired light affect.

CHARACTERISTICS

- Luminous efficiency; Super bright >140LM/W
- Available Light colour warm white, pure white, cool white
- Cam locks on the light mounts, allowing easy 180 degree rotation
- Horizontal light mounting allows 140 degree light angle
- Small power consumption; Energy saving
- Long life- between 80-100,000 hours
- Low working temperature, making them reliable and safe
- Manual ON/OFF Switch or Solar controller; automatically turns on at dark and run for a full night. Or adjustable timer to desired light requirements.



FRONTAL LIGHT ARRAY



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MAST

Electromechanical Mast designed and purpose built by PLG for easy and fast operation.

NO WINCHING REQUIRED simple up/down switch on control panel

Extends to 5.5 meters total height approximately 6 meters with Lights .

BENEFITS

- Simple operation
- Easily serviceable
- Minimal moving parts
- No winching required

CHARACTERISTICS

- Trapezoidal thread actuation
- Zinc plated components for corrosion resistance.
- Adjustable sealing components for long life and serviceability
- Adjustable wear components for long service life
- Australian quality steel used in all components

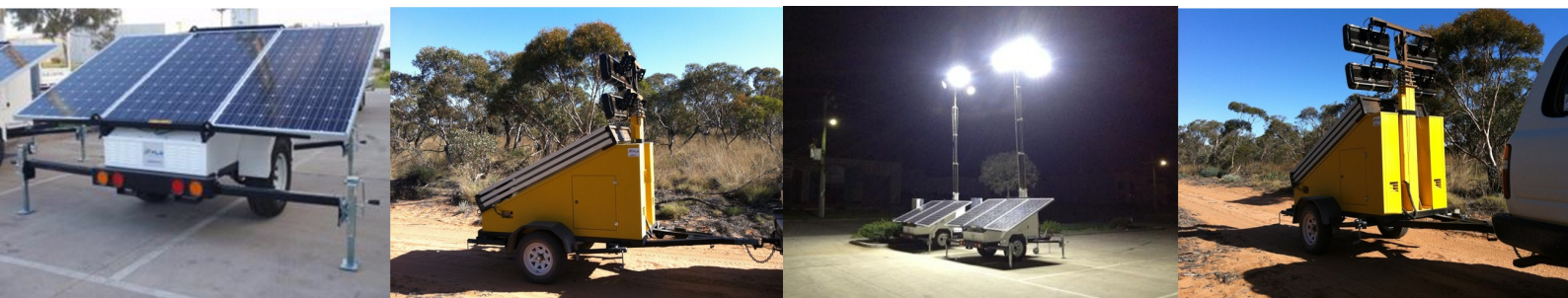


BODY

The Body has been designed for easy access to controls with separate electrical box .

CHARACTERISTICS

- Control box and lockable enclosure for electronics
- Louvre's for ventilation, allowing adequate air flow without the need for cooling fans
- High quality steel and materials. Cabinet made from zinc plated steel for corrosion resistance, strength and long life



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ECOTREKKA 400

TRAILER

Single axle, LED Tail lights, Fork lift pockets, road ready, Customisable to your needs.

BENEFITS

- Easy to transport and manoeuvre
- Easily serviced and maintained



CHARACTERISTICS

- 5 or 6 stud Toyota Landcruiser stud pattern 16 inch rim as an option
- Single Axle trailer- Road ready
- Suspension- Standard Road Requirements
- LED tail lights
- 4x manually operated supports/Outriggers and Heavy duty Jockey Wheel
- Reversible tow bar for reduction in length during transportation.

OPTIONAL EXTRAS

The EcoTrekka 400 is customisable to your needs. Below are Some optional extras.

Additional Batteries	2x 200 Ah batteries
Independent Suspension	For heavy duty applications. For heavy duty applications we recommend independent suspension as an option. We have also supplied these on a skid base to suit underground mines
Mechanical Hand brake	Mechanical drum cable handbrake
600w Wind Turbine	Additional power provided- vertical axis. 600W average charge 750W max charge. High quality 20-25 year life Magnetic levitation style
High wind Package	Additional Outriggers for use in high wind conditions
AC mains battery charger back up	1000W Single out put Battery Charger
24V DC to 240V inverter	2000W available

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FACT

No need for old noisy generator powered mobile towers. At the Photovoltaic Lighting Group (PLG) we have integrated the latest technology in LED lighting with solar power to produce: "Sustainable Mobile Lighting".

All our products are made in Victoria Australia to suit the most rugged conditions.

Solar Mobile lighting tower has many benefits in preference to generator powered units.

- ⇒ No need to refuel
- ⇒ Highly reliable and easy to transport and manoeuvre on a work site
- ⇒ Removes the risk of high voltage electrocution as lights are only 24v
- ⇒ Simple operation on a panel.
- ⇒ 80-100 meter radius light coverage
- ⇒ Same light output as a generator powered lighting tower, without the cost, fuel, unreliability and maintenance needed.



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