



SOLAR HITECH



## SOLAR PHOTOVOLTAIC SOLUTIONS

Lighting and Power systems for a greener tomorrow

# INTRODUCTION

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**Solar Hitech** brings you the next generation of reliable, cost effective and efficient solar photovoltaic lighting and power solutions. Established in 1999, Solar Hitech was the first company to introduce **Evacuated Tube Collector (ETC) solar thermal** technology in India. For the last 15 years, the company has established a strong tradition in manufacturing and delivery of high quality solar water heating solutions.

The company is proud to bring you its line of solar photovoltaic systems that caters to domestic/residential, small and large commercial as well as industrial lighting and power consumption needs.

## WHY SOLAR PHOTOVOLTAICS

Solar Photovoltaics offer a free and efficient source of energy that can help reduce your regular electricity needs from the grid:

### ***Cut your electricity bills***

Sunlight is free and once installed, your solar lighting/power system will reduce your electricity costs

### ***Reduce your carbon footprint***

A typical home solar PV system saves over a tonne of carbon dioxide emissions annually. It's clean, green and free energy.

### ***Give back to the grid:***

If your system is producing more electricity than you need, you can sell the surplus back to the grid.



## WHY SOLAR HITECH SOLUTIONS

We believe in being not just manufacturers, but solution providers. Our solar lighting line includes **solar lanterns**, **CFL & LED based street lighting solutions** as well as **CFL & LED home lighting solutions**. Our solar power line includes **solar pumps** and **solar on-grid hybrid solutions** for residential, commercial and industrial power needs.

We believe in delivering quality solutions that start with fault-proof system design, quality products and after sales service that ensures your systems are always up and running. As an established player in the market, Solar Hitech provides end-to-end solutions that involve

- Requirements Analysis & Site Inspection
- Technology selection
- Optimized Solution Design
- Engineering, Procurement & Commissioning of projects
- Quality Supervision Control
- After-Sales Service & Maintenance

# EOS – SOLAR PORTABLE LANTERNS

The Eos series of solar portable lanterns by Solar Hitech provides sustainable lighting to people without access to electricity. Eos Solar Lanterns are a cheap and cost-effective way to bring lighting to places where reliable lighting is yet to be available.



## TECHNICAL SPECIFICATIONS

MODEL	LOAD	PV MODULE	BATTERY	AUTONOMY/BACKUP
ES - 1	3W LED	6V, 5 Wp	6V, 4.5 Ah	3 - 4Hrs / 3 Days
ES - 2	7W CFL	12V, 10Wp	12V, 7.2Ah	3 - 4Hrs / 3 Days

## Components

- PV Solar module – 5 Wp and 10 Wp variants.
- High efficiency LED/CFL Lamps – 3 W and 7 W variants
- Sealed batteries : 4.5 Ah and 7.2 Ah
- Mounting and cable accessories

## Features

- Smart battery management system with battery charging, low battery/load cut-off indications
- System components with built in reverse polarity, battery over-charge/deep discharge, over load and short circuit protection.
- Conformal coated PCB with rugged

## Benefits

- Long life and durable for year round use
- Extremely safe with no dependence on grid or kerosene for power
- Continuous, flicker free light up to 16 long hours
- Saves up to Rs 4,110 per year on kerosene consumption
- Standard 1 year warranty, extended warranty available on request.

# HELIOS – SOLAR STREET LIGHTING

The Helios line of street lights reduces dependence on conventional electricity sources to light urban or rural areas, where power may be intermittent. The Helios line is customized for outdoor street lighting applications – be it remote rural locations, busy urban streets or roads/pathways in commercial/residential complexes. The Helios line comes in both CFL and LED variants.

## Helios CFL Street Lighting Solutions

TECHNICAL SPECIFICATIONS				
MODEL	LIGHT LOAD	PV MODULE	BATTERY	AUTONOMY/BACKUP
HSC-11	3W LED	12V, 74Wp	12V, 75Ah	12 Hrs X 2 Days
HSC-22	7W CFL	12V, 100Wp	12V, 100Ah	12 Hrs X 2 Days
HSC-11X2	11 Watt X 2 nos	12V, 100Wp	12V, 100Ah	12 Hrs X 2 Days



### Features

- Luminaries with CFL preheat and LED management technologies for long life
- Smart battery management system with battery charging, low battery and load cut-off
- System components with built in reverse polarity, battery over-charge/deep discharge, over load, Short circuit and open circuit protection
- Automatic Operation
- DTDC/ Timer Modules

### Components

- Solar module/array 74 Wp – 100 Wp for CFL Lighting applications
- High efficiency CFL Lamps 11 W – 22 W
- Low Maintenance, High efficiency batteries 75 Ah and 100 Ah
- Pre-painted galvanized pole with battery enclosure – customized as per needs
- Mounting and cable accessories

### Benefits

- Long life and durable for year round use
- Extremely safe with no dependence on grid or kerosene for power
- Continuous, flicker free light up to 16 long hours
- Saves up to Rs 4,110 per year on kerosene consumption
- Standard 1 year warranty, extended warranty available on request.

## Helios LED Street Lighting Solutions

TECHNICAL SPECIFICATIONS				
MODEL	LIGHT LOAD	PV MODULE	BATTERY	AUTONOMY/BACKUP
HSL-9	9 Watt	12V, 37Wp	12V, 40Ah	12 Hrs X 2 Days
HSL-9X2	9Watt -2 nos	12V, 74Wp	12V, 75Ah	12 Hrs X 2 Days
HSL-18	18watt	12V, 74wp	12V, 75Ah	12 Hrs X 2 Days
HSL-24	24watt	12V, 100Wp	12V, 100Ah	12 Hrs X 2 Days



### Features

- Low power consumption, Aluminium die cast body
- Smart battery management system with battery charging, low battery and load cut-off
- System components with built in reverse polarity, battery over-charge/deep discharge, over load, short circuit and open circuit protection
- Automatic Operation, DTDC/ Timer Modules

### Components

- Solar module/array 37 Wp – 100 Wp for CFL Lighting applications
- High efficiency CFL Lamps 9 W – 24 W
- Low Maintenance, High efficiency batteries 40 Ah, 75 Ah and 100 Ah
- Pre-painted galvanized pole with battery enclosure customized as per needs
- Mounting and cable accessories

### Benefits

- High performance LED Luminaries
- Extremely long life LEDs (>50,000 hrs)
- No Lamp blackening
- Stand-alone operation without the need for expensive power lines, and transformers
- High backup (Autonomy), even under extreme cloudy condition
- Savings of up to Rs 10,000 per year on electrical consumption and lamp replacement
- Standard warranty of 1 year, extended warranty available

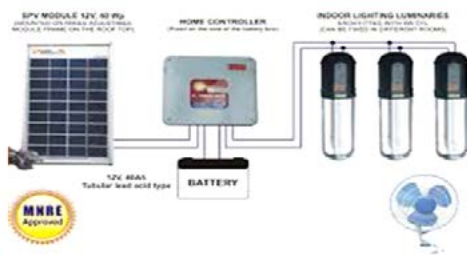


# ARGOS - SOLAR HOME/COMMERCIAL LIGHTING

The Argos line of home lighting systems power your entire home or commercial enterprise's lighting requirements. The Argos line is customized for indoor lighting applications – be it regular urban homes or small and large enterprises. The Argos line comes in both CFL and LED variants.

## Argos – CFL Home/Commercial Lighting Solutions

TECHNICAL SPECIFICATIONS				
MODEL	LIGHT SOURCE	SOLAR PANEL	BATTERY	DC FAN
AGC-001	9W	12 V / 18 Wp	12 v/20Ah	----
AGC-002	9w x 2	12 V / 37 Wp	12 v/40Ah	----
AGC-003	9W/11 w x2 units, 18 W DC Pedestal Fan 1 unit	12 V / 74 Wp	12 v/75Ah	1 No
AGC-004	9W X 4 units	12 V / 74 Wp	12 v/75Ah	----



### Features

- Home lighting & study room lighting
- Emergency power backups
- Luminaries with CFL preheat and LED management technologies for long life
- Smart battery management system with battery charging, low battery and load cut-off
- System components with built in reverse polarity, battery over-charge/deep discharge, over load, Short circuit and open circuit protection

### Components

- Solar Module: 18 Wp, 37 Wp, 74 Wp
- High efficiency CFL lamps – 7W, 9W, 11W
- Low Maintenance batteries – 20 Ah, 40 Ah, 75 Ah
- Mounting and cable accessories

### Benefits

- Long life and high performance CFL Luminaries
- No depends grid or kerosene for power
- High back up, even under extreme cloudy conditions
- Standard warranty of 1 year, extended warranty available

## Argos – LED Home/Commercial Lighting Solutions

TECHNICAL SPECIFICATIONS				
MODEL	LIGHT SOURCE	SOLAR PANEL	BATTERY	DC FAN
AGL-55/AGL-75	5.5w*1 no/ 2.5w- 3nos	12 v / 10 Wp	12 v / 7.5Ah	----
AGL-275	5.5w-5 no's	12 v / 37 Wp	12 v / 40Ah	----
AGL-275x	5.5w- 5No's, 14 W Table/Wall Mounted DC Fan	12 v / 74 Wp	12 v / 75Ah	1 No
AGL-10, AGL165x	10w-1no,5.5w-3nos, 14 W Table/Wall Mounted DC fan	12 v / 74 Wp	12 v / 75Ah	1 No



### Benefits

- No Lamp replacement for several years
- Long life and high performance LED Luminaries
- No dependence on grid or kerosene for power
- High back up, even under extreme cloudy conditions
- Standard warranty of 1 year, extended warranty available

### Components

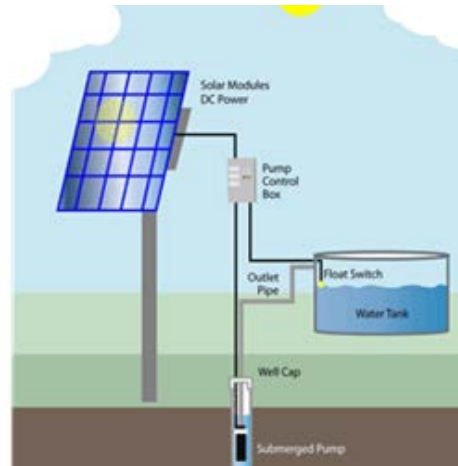
- Solar Module: 10 Wp, 37 Wp, 74 Wp
- High efficiency LED lamps – 2.4W, 3.6W, 4W, 5W, 5.5W, 10W,
- Low Maintenance batteries – 12V/7.5 Ah, 40 Ah, 75 Ah
- Mounting and cable accessories

### Features

- Home lighting & Study room lighting
- Low power consumption
- Automatic Dusk Dawn operation (DTDC)
- Extremely Long life LEDs (>50,000 hrs)
- Smart battery management system with battery charging, low battery and load cut-off
- System components with built in reverse polarity, battery over-charge/deep discharge, over load, Short circuit and open circuit protection

# JUNO – SOLAR WATER PUMPS

The Juno line of solar submersible pumps is a boon to enterprises where conventional electricity is unreliable for irrigation and water usage purposes. The pumps are designed to ensure consistent water output year on year along with an integrated set of long-lasting modules and supporting components. The series is available across a variety of power needs and can be customized for AC/DC based operations.



## TECHNICAL SPECIFICATIONS

MODEL NAME	JN1000	JN1500	JN2200	JN3700	JN4000	JN5500	JN7500	JN10K	JN12K	JN15K	JN18K
Rated power(W)	1500	1500	2200	3700	3700	5500	7500	11000	11000	15000	15000
Pump capacity max ( HP)	1HP	1.5HP	2HP	3HP	4HP	5HP	7.5HP	10HP	12HP	15HP	18HP
Input voltage max (VDC)	750										
MPPT Voltage Range (VDC)	500-600										
Output Phase	1 Ph / 3 Ph										
Rated output Voltage (VAC)	380-440										
Efficiency (%)	98										
Output frequency (Hz)	0-50Hz										
Max solar array power (KWp)	1.125	1.65	2.25	3.3	4.5	5.5	8.25	11.25	13.8	16.5	19.5
Suggested Solar Panel Capacity (KWp)	1	1.5	2.1	3	4	5	7.5	10	12	15	18

### Components

- Range of pumps available from 1.5 Hp to 18 Hp
- PV array ranging from 1000 Wp to 18000 Wp
- Long life rugged pump controller
- Other pumping systems available on request

### Benefits

- No dependence on erratic grid power or expensive diesel
- Wide range of solutions : Surface, open well, drip, sprinkler and other
- Standard warranty 1 year, extended warranty available

### Features

- Galvanised iron mounting structure for long life
- Optional auto or manual operating systems
- Advanced safety features including dry run, reverse polarity, low voltage and lightning arrestor
- Wide operating temperature range 0-50 Degree Celsius

# ZEUS – HYBRID POWER SYSTEMS

The Zeus line of hybrid power systems are your personal rooftop power generators. The Zeus line provide homes and commercial enterprises the ability to use solar power, while still sourcing power from the grid when needed. Hybrid power systems offer the independence of reducing electricity costs, with battery backup and storage, and using the option of solar power as much as possible. Hybrid power systems are also less expensive than off-grid systems and avoid the need for a backup generator that runs on diesel or other forms of fuel. Zeus is apt for servicing power needs of homes, petrol pumps & small to medium enterprises.



TECHNICAL SPECIFICATIONS						
MODEL NAME	ZS600	ZS800	ZS1000	ZS1500	ZS2000	ZS3000
Typical Appliances	Tv-1no. Tube light-3nos Fan-2nos	Computer-1no. TV-1no. Tube Light-4nos Fan-2nos	Computer-1no. Printer-1no. TV-1no. Tube Light-4nos. Fan-3no.	Computer-1no. Printer-1no TV-1no. Tube Light-4nos Fan-2no. Washing Machine / Refrigerator-1no.	Computer-1no. Printer-1no TV-1no. Tube Light-6nos Fan-4no. Washing Machine / Refrigerator -1no.	Computer-1no. Printer-1no TV-1no. Tube Light-4nos Fan-3no. Washing Machine / Refrigerator -1no.
Operating Hrs	4 Hrs	4 Hrs	4 Hrs	4 Hrs	4 Hrs	4 Hrs
PV Module	12v/120Wp-4nos	12v/150Wp-4nos	12v/250Wp-4nos	12v/150Wp-8nos	24v/250Wp-6nos	24v/250Wp-8nos
Battery	12v/150Ah-1no	12v/180Ah-1no	12v/150Ah-2nos	12v/200Ah-2nos	12v/135Ah-4nos	12v/150ah-4nos
Inverter	12v/600VA	12v/800VA	24v/1KVA	24v/1.5KVA	24V/2KVA	48V/3KVA

## Components

- Solar array ranging from 120 Wp to 2000 Wp
- Long-life, deep-cycle battery ranging from 150 Ah to 600 Ah
- Safe and secure PCU ranging from 600 to 3000 VA
- Mounting and cable accessories, desired tilt available on PV structure
- Configuration and customization possible on request

## Benefits

- Solar power on demand
- Saves on fuel cost of generators set
- Smooth sine wave enables functioning of supported appliances
- Standard warranty of 1 year, extend warranty available

## Features

- Maximum utilization of solar energy
- Solar inverter with 92% Efficiency
- Energy management function
- Maximum power point tracking (MPPT)
- Pure sine wave inverters
- Built-in over voltage & short circuit protection

# SOLAR OFF GRID POWER PLANT



## Advantages Of Off-Grid Solar Systems

### No Access To The Utility Grid

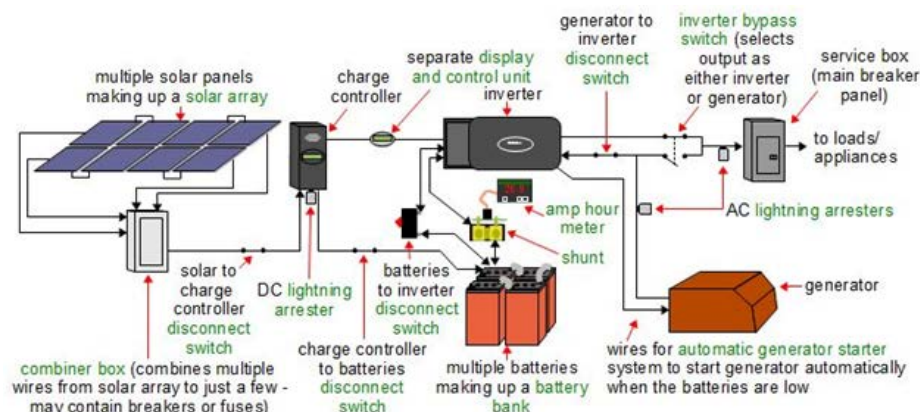
Off-grid solar systems can be cheaper than extending power lines in certain remote areas.

Consider off-grid if you're more than 100 yards from the grid. The costs of overhead transmission lines range from \$174,000 per mile (for rural construction) to \$11,000,000 per mile (for urban construction).

### Become energy self-sufficient

Living off the grid and being self-sufficient feels good. For some people, this feeling is worth more than saving money. Energy self-sufficiency is also a form of security. Power failures on the utility grid do not affect off-grid solar systems.

On the flip side, batteries can only store a certain amount of energy, and during cloudy times, being connected to the grid is actually where the security is. You should install a backup generator to be prepared for these kinds of situations.



## Equipment for Off-Grid Solar Systems

Typical off-grid solar systems require the following extra components:

- Solar Charge Controller
- Battery Bank
- DC Disconnect (additional)
- Off-Grid Inverter
- Backup Generator (optional)