

In-Eiya™ LED Lamp powered by external battery

Affordable lighting for people living without access to electricity with battery on rent



> Features

Light intensity

2.5 W LED Lamp equivalent to 7 W CFL
5 W LED Lamp equivalent to 11 W CFL

Same brightness

throughout the battery voltage from
11.5 V to 14.3 V

Backup duration

8 to 15 hours* when powered from
external battery 12 V, 4.5 Ah

+ Benefits

Sufficient to illuminate

a room for daily household activities

Constant illumination

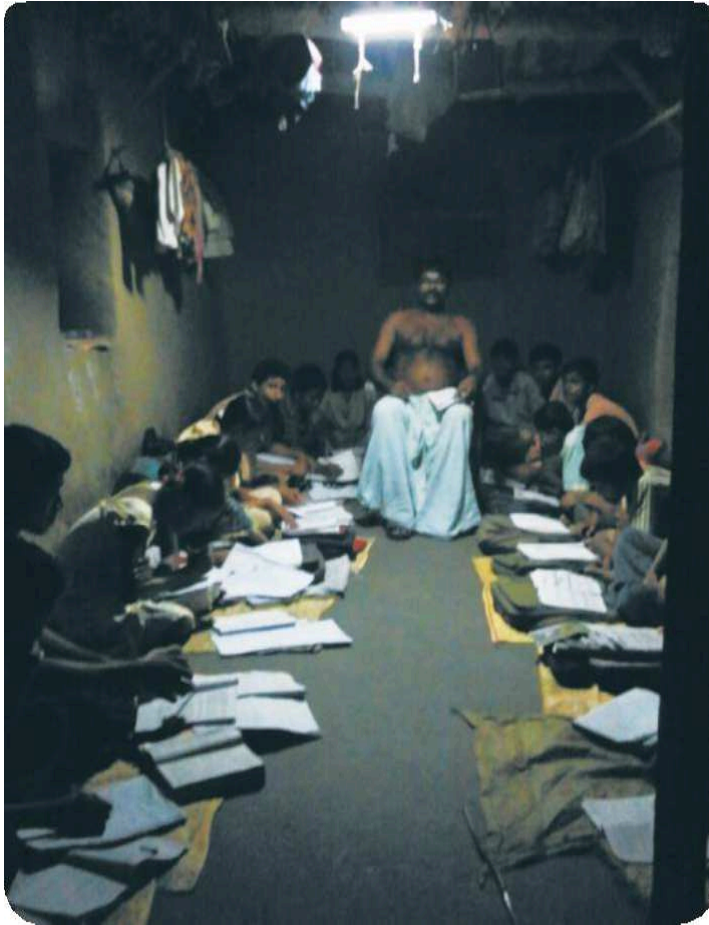
until battery is drained

Free from health hazards

due to smoke from kerosene lamp



This lamp can be powered by Electrilabs supplied 12 V, 4.5 Ah backup unit for LED Lamp or any 12 V external battery. This lamp has a pull cord switch to switch ON and OFF the lamp when connected to external battery. The lamp has intelligence to monitor battery voltage and gets disconnected from battery when battery has reached cut off voltage.



Children studying under In-Eiya™ LED Lamp powered by external battery at Sagar Island, India.



Woman from Kargil slum, Bhubaneswar, India using In-Eiya™ LED lamp in her shop. She takes battery on rent everyday from the entrepreneur.

ProductDescription

ProductReferenceNumber

LED Lamp - 2.5W

ELE-LB11-2.5W

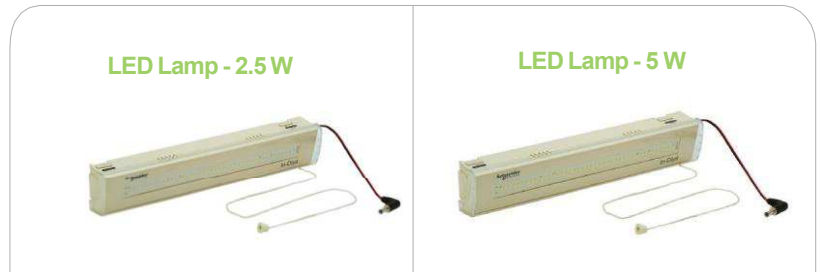
LED Lamp - 5W

ELE-LP04-5W

In-Eiya™ LED Lamp

powered by external battery

Technical Specifications



Product Reference Number	ELE-LB11-2.5W	ELE-LP04-5W
Power consumption	2.5 W	5 W
Battery input voltage	11.5 - 14.3 V	11.5 - 14.3 V
Maximum light output	Equivalent to 7 W CFL	Equivalent to 11 W CFL
Color of light emitted by the LED	White	White
Low voltage disconnect	11.5 \pm 0.1 V	11.5 \pm 0.1 V
Backup duration* with 12 V, 4.5 Ah In-Eiya™ backup unit	15 hours	8 hours
Cable to plug to In-Eiya™ backup unit	1 m, 20 AWG (0.5 mm ²)	1 m, 20 AWG (0.5 mm ²)
Battery low	Red LED is ON	Red LED is ON
Battery charge status	Yellow LED is ON	Yellow LED is ON
Mechanical Specifications		
Dimensions (L x B x H)	318 x 52 x 60 mm	318 x 52 x 60 mm
Net weight	0.31 Kg	0.32 Kg
Gross weight	0.42 Kg	0.43 Kg
Environmental		
Operating temperature	-10 to 55° C	-10 to 55° C
Storage temperature	-10 to 55° C	-10 to 55° C
Relative humidity	90 %	90 %

*Backup duration will increase with higher capacity battery

Backup unit for In-Eiya™ LED Lamp with cell phone charger

Backup device for In-Eiya™ LED Lamp and cell phone charging suitable for people living without electricity



> Features

Backup unit
for 2.5 W / 5 W LED lamps

Universal cell phone charger
with USB port

Low weight and portable
12 V, 4.5 Ah SMF* battery
provided with strap to hand carry

+ Benefits

Reliable and safe lighting
at a cost lower than kerosene lamp

Affordable solution
for mobile charging for people living without
access to electricity

Easy to transport
to households everyday



The backup unit can be fixed to wall or can be hanged through the strap provided with the backup unit. The switch provided on the backup unit is used to power the built-in cell phone charger. Customer need to buy a suitable cable with USB interface to charge cell phone through USB port provided on the backup unit.

*Sealed Maintenance Free

Backup unit for In-Eiya™ LED Lamp with cell phone charger

Technical Specifications

Backup for LED Lamp



Backup for LED Lamp with cell phone charger



Product Reference Number	ELE-B06-4.5 AH	ELE-B07-4.5AH
Battery type	Sealed maintenance free lead acid	Sealed maintenance free lead acid
Rated voltage	12 V	12 V
Rated capacity	4.5 Ah	4.5 Ah
Number of charge / discharge cycles	500	500
Cell phone charger port	-	5.5 V, 400 mA
Low voltage disconnect	-	11.6 ± 0.1 V
Switch*	-	6A
Mechanical Specifications		
Dimensions (L x B x H)	132 x 93 x 132 mm	132 x 98 x 155 mm
Net weight	2.15 Kg	2.19 Kg
Gross weight	2.37 Kg	2.42 Kg
Environmental		
Operating temperature	-10 to 55° C	-10 to 55° C
Storage temperature	-10 to 55° C	-10 to 55° C
Relative humidity	90 %	90 %

*Switch should be ON while charging your cell phone.

Switch should be OFF when you are not charging your cell phone, in order to avoid draining of battery.

In-Eiya™ Solar Home Lighting System with 1 Lamp

Autonomous lighting and mobile charging solution for remote unelectrified households



> Features

Autonomous lighting system with cell phone charger

powered by 10Wp solar panel and 12 V, 4.5 Ah battery

Plug and play connection

with reverse polarity protection

Light Intensity

2.5 W LED Lamp equivalent to 7 W CFL
5 W LED Lamp equivalent to 11 W CFL

15/8 hours* of backup with
one day of charge

+ Benefits

Clean and safe energy

for lighting and mobile charging

Noneed of tool

to make connections

Sufficient to illuminate

a room for daily household activities

Free from health hazards

due to smoke from kerosene lamp

Low cost

compared to CFL based solar home lighting system

* Refer technical datasheet Page 14

In-Eiya™ Solar Home Lighting System with 1 Lamp

Technical Specifications



Product Reference Number	ELE-LB13-SB-2.5W	ELE-LP05-SB-5W
LED lamp		
Power consumption	2.5 W	5 W
Solar input voltage	16 - 21 V	16 - 21 V
Battery input voltage	11.5 -14.3 V	11.5 -14.3 V
Maximum light output	Equivalent to 7 W CFL	Equivalent to 11 W CFL
Color of light emitted by the LED	White	White
Battery charging / Power ON (solar)	Green LED is ON	Green LED is ON
Battery low	Red LED is ON	Red LED is ON
Battery charge status	Yellow LED is ON	Yellow LED is ON
Backup duration	15 hours	8 hours
Cable to plug to In-Eiya™ backup unit	1m, 20 AWG (0.5 mm ²)	1m, 20 AWG (0.5 mm ²)
Low voltage disconnect	11.5 ± 0.1 V	11.5 ± 0.1 V
Solar panel		
Solar panel type	Mono-Crystalline	Mono-Crystalline
Maximum rated power	10 Wp	10 Wp
Peak power voltage	17 V	17 V
Cable to plug to In-Eiya™ LED Lamp	10mts, 18 AWG (0.75 mm ²)	10mts, 18 AWG (0.75 mm ²)
Backup unit with cell phone charger		
Battery type	SMF Lead acid	SMF Lead acid
Battery capacity	12 V , 4.5 Ah	12 V , 4.5 Ah
Number of charge / discharge cycles	500	500
Cell phone charger port	5.5 V , 400 mA	5.5 V , 400 mA
Low voltage disconnect	11.6 ± 0.1 V	11.6 ± 0.1 V
Switch*	6 A	6 A
Mechanical specifications		
Net weight - Lamp	0.33 Kg	0.34 Kg
Net weight - Battery with cell phone charger	2.15 Kg	2.19 Kg
Net weight - Solar Panel	1.76 Kg	1.76 Kg
Gross weight	5.20 Kg	5.21 Kg
Environmental		
Operating temperature	-10 to 55° C	-10 to 55° C
Storage temperature	-10 to 55° C	-10 to 55° C
Relative humidity	90 %	90 %

*Switch should be ON while charging your cell phone.

Switch should be OFF when you are not charging your cell phone, in order to avoid draining of battery.

Solar Charge Controller

Energy efficient solar charge controller with cell phone charger for solar home system



> Features

Highly energy efficient and intelligent charge controller

for battery and load management in a solar home system

Built in universal cell phone charger with USB port

Trickle charging mechanism to increase battery life

Robust and compact design

Multi-color indicators to monitor the health of the system for optimum utilization

+ Benefits

Maximum harvesting of

solar energy to power DC lamp, DC TV, DC fan and charge cell phone

No need of separate cell phone charger

Increased battery life

During the period of battery maintenance or replacement, loads can be powered from the solar panel during day time

Solar Charge Controller

Technical Specifications

Solar Charge Controller - 3 A



Solar Charge Controller with USB - 3A



Product Reference Number	ELE-SCC01-3A	ELE-SCC02-3A
Solar input	17 - 21 V	17 - 21 V
Rated Output Voltage		
• Output port 1	12 V DC	12 V DC
• Output port 2	12 V DC	12 V DC
• Mobile Charging Port	5.5 V, 400mA	5.5 V, 400mA
USB cable to charge cell phone	-	YES
Maximum rated output current	3 A continuous load, 3.9A for 1 hour	3 A continuous load, 3.9A for 1 hour
Rated output power	36 W	36 W
Indications		
Battery charging	Green LED on the LEFT is ON	Green LED on the LEFT is ON
Battery high	Green and Yellow LED on the RIGHT are ON	Green and Yellow LED on the RIGHT are ON
Battery in conservation mode	Yellow LED is ON	Yellow LED is ON
Battery cut off	Red LED is ON	Red LED is ON
Protection and Monitoring		
Battery and solar panel reverse polarity protection	YES	YES
Battery overcharge and undercharge protection	YES	YES
High voltage disconnect	14.3 \pm 0.2 V	14.3 \pm 0.2 V
Low voltage disconnect	11.6 \pm 0.1 V	11.6 \pm 0.1 V
Reconnect voltage	12.7 V	12.7 V
Short circuit protection	YES	YES
Over current protection	YES (fuse 5 A)	YES (fuse 5 A)
Input surge protection	YES	YES
Mechanical Specifications		
Dimensions (L x B x H)	95 x 30 x 110 mm	95 x 30 x 110 mm
Net Weight	0.27 Kg	0.27 Kg
Gross Weight	0.32 Kg	0.32 Kg
Environmental		
Operating temperature	-10 to 55° C	-10 to 55° C
Storage temperature	-10 to 55° C	-10 to 55° C
Relative humidity	90 %	90 %

In-Eiya™ LED Lamp for Solar Home System

Energy efficient longer life LED Lamp to reduce 50% cost on solar panel and battery



> Features

Can be powered by
any 12 V system DC source

50% less power consumption
compared to CFL lamp for same level
of light output

Same brightness
throughout the battery voltage from
11.6V to 14.3 V

50,000 hours
of LED life

+ Benefits

Suitable for solar home system
with 12V charge controller and 12 V
battery

Low cost
compared to CFL based solar home
system

Constant illumination
until battery is drained

Longer life
than CFL lamps



*This lamp can be used with any 12V Solar Home System.
This lamp does not have pull cord switch and needs an external switch to control switching of the Lamp.
The lamp cannot detect battery charge status.*

In-Eiya™ LED Lamp for Solar Home System

Technical Specifications

LED Lamp for
Solar Home System - 2.5W



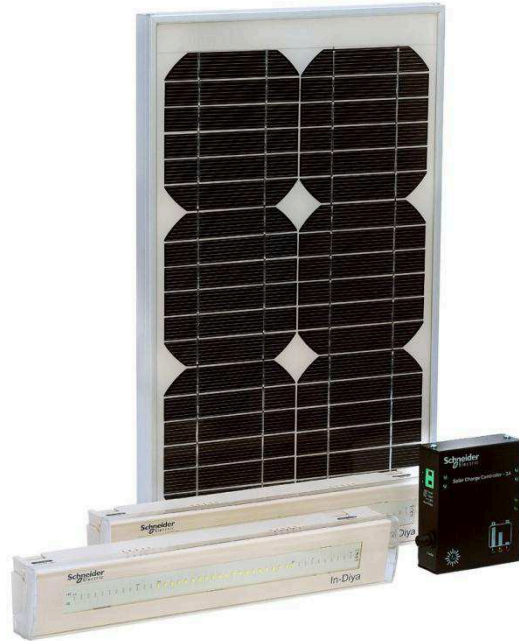
LED Lamp for
Solar Home System - 5W



Product Reference Number	ELE-LB01-2.5W	ELE-LP07-5W
Power consumption	2.5 W	5 W
Input voltage	10 -15 V	10 -15 V
Maximum light output	Equivalent to 7 W CFL	Equivalent to 11 W CFL
Color of light emitted by LED	White	White
Mechanical Specifications		
Dimensions (L x B x H)	318 x 52 x 60 mm	318 x 52 x 60 mm
Net weight	0.31 Kg	0.32 Kg
Gross weight	0.42 Kg	0.43 Kg
Environmental		
Operating temperature	-10 to 55° C	-10 to 55° C
Storage temperature	-10 to 55° C	-10 to 55° C
Relative humidity	90 %	90 %

Solar Home System with 2 Lamps

Scalable solar home lighting system with cell phone charger



> Features

10Wp solar lighting system
with 2 nos. of 2.5 W LED lamps and
3A charge controller with built-in
cell phone charger

8 hrs backup for two lamps
with one day of charge

Trickle charging mechanism
to increase battery life

Scalable system
to connect loads up to 36 Watt (Max) by
connecting 12 V, 40 Wp solar panel
and 12 V, 50 Ah battery

+ Benefits

Provides reliable lighting
for people living without access to electricity

Sufficient to illuminate
two rooms for daily household activities

Increase in battery life

Low cost
compared to CFL based solar home lighting
system

**Can operate lamps and cell
phone charger during day**
time when battery is getting charged



*Customer needs to buy In-Eiya™ backup unit 12 V, 4.5 Ah (Product reference # ELE-B06-4.5AH) separately.
Customer can also connect any 12 V battery up to 50 Ah.*

Solar Home System with 2 Lamps

Technical Specifications

Solar Home System – 2 Lamps	
	
Product Reference Number	ELE-SHS01-10W2L
LED Lamps	
Power consumption	5 W
Input voltage	10 – 14.5 V DC
Efficiency of LED controller circuit	Greater than 85%
Maximum light output of each lamp	Equivalent to 7 W CFL
Color of light emitted by the LED	White
LED life	50000 hours*
Solar Panel	
Type	Mono-Crystalline
Maximum rated power	10 Wp
Input voltage	17 V
Cable to connect solar panel to solar charge controller	10 m, 18 AWG (0.75 mm ²)
Solar Charge Controller with Cell Phone Charger	
Input voltage	16 – 21 V DC
Maximum rated output current	3 A continuous load, 3.9 A for 1 hour
Rated Output Voltage	
• Output 1	12 V DC
• Output 2	12 V DC
Rated Output power	36 W
Cell phone charger port	5.5 V, 400 mA
High voltage disconnect	14.3 ± 0.2 V
Low voltage disconnect	11.6 ± 0.1V
Reconnect voltage	12.7 V
Protection and Monitoring	
Battery charging	Green LED on the left is ON
Battery high	Green and Yellow LED on the right is ON
Battery in conservation mode	Yellow LED is ON
Battery low	Red LED is ON

* Under bright sunlight condition

Solar Home System with 2 Lamps

Technical Specifications

Solar Home System – 2 Lamps



Product Reference Number	ELE-SHS01-10W2L
Accessories	
Cable to connect LED Lamps to solar charge controller	10 m, 22 AWG (0.34 mm ²)
Bed switch to operate lamps	5 A
Cable to charge In-Eiya™ backup unit	1 m, 2 core 20 AWG (0.5 mm ²)
USB cable to charge cellphone	0.5 m, 2 core 40 AWG (0.005 mm ²)
Glass cartridge fuse	5 A
Screw	M3.5 X 19 mm
Environmental	
Operating temperature	-10 to 55° C
Storage temperature	-10 to 55° C
Relative humidity	90%
Operating temperature	-10 to 55° C
Relative humidity	90%











Recommended cable specifi		for solar panel size higher than 12 V, 10 Wp and battery capacity higher than 12 V, 5 Ah				
Solar panel rating	Battery rating	Cable size to connect solar panel to solar charge controller - 3A*		Cable size to connect battery to solar charge controller - 3A**		Maximum allowable load at 12 V (W)
		(mm ²)	(AWG)	(mm ²)	(AWG)	
12 V, 20Wp	12 V, 10Ah	0.82	16	0.82	16	12
12 V, 30Wp	12 V, 30Ah	1.5	14	0.82	16	24
12 V, 40Wp	12 V, 50Ah	1.5	14	0.82	16	36

*The length of the cable considered from solar panel to solar charge controller is 10 mts

**The length of the cable considered from battery to solar charge controller is 1.5 mts

Solar Home System with 2 Lamps

The package of Solar Home System - 2 Lamps consists of the following items

Serial Number	Item description		Quantity
1	Solar panel 12 V, 10 Wp with 10 m, 2 core, 18 AWG (0.75 mm ²) cable		1
2	Solar Charge Controller - 3A		1
3	USB cable to charge cell phone		1
4	LED Lamp - 2.5 W		2
5	Bed switch - 5 Amps, to operate the LED Lamps		2
6	10 m, 2 core, 22 AWG (0.34 mm ²) cable to connect LED Lamps to the solar charge controller		1
7	Cable to charge In-Eiya™ backup unit		1
8	Glass cartridge fuse - 5 Amps		2
9	Screw - M3.5 X 19 mm		6
10	Backup for LED Lamp (ELE-B06-4.5AH)		1



The Solar Home System - 2 Lamps does not come with battery. The customer need to purchase backup unit (Product reference # ELE-B06-4.5AH) to use this system.