



Experience on Implementation of Solar Home & Street Lighting System

Signify is the world leader in lighting

We provide high-quality energy efficient lighting products, systems and services

Light sources



Luminaires



Systems and Services



No. 1

Conventional.
LED, Connected

€7bn

sales in 2017,
~ 75% professional

>32,000

people in 70 countries

No. 1

Industry leader
Dow Jones
Sustainability Index

Signify proudly markets the best lighting brands in the world

PHILIPS



Our global brand in professional and consumer lighting

interact



Our Internet of Things platform and connected lighting systems

MODULAR
LIGHTING —
INSTRUMENTS



Our international brand in architectural lighting

LUCE
PLAN



Our high-end lighting brand made in Italy

Challenges

280

people in India lacks access to electricity million

Rural India: little or no electricity

Urban India: Power outages

8 to 10

hours

Government to bridge the energy gaps by renewable energy

Strong demand for **Off-grid Solar alternative**

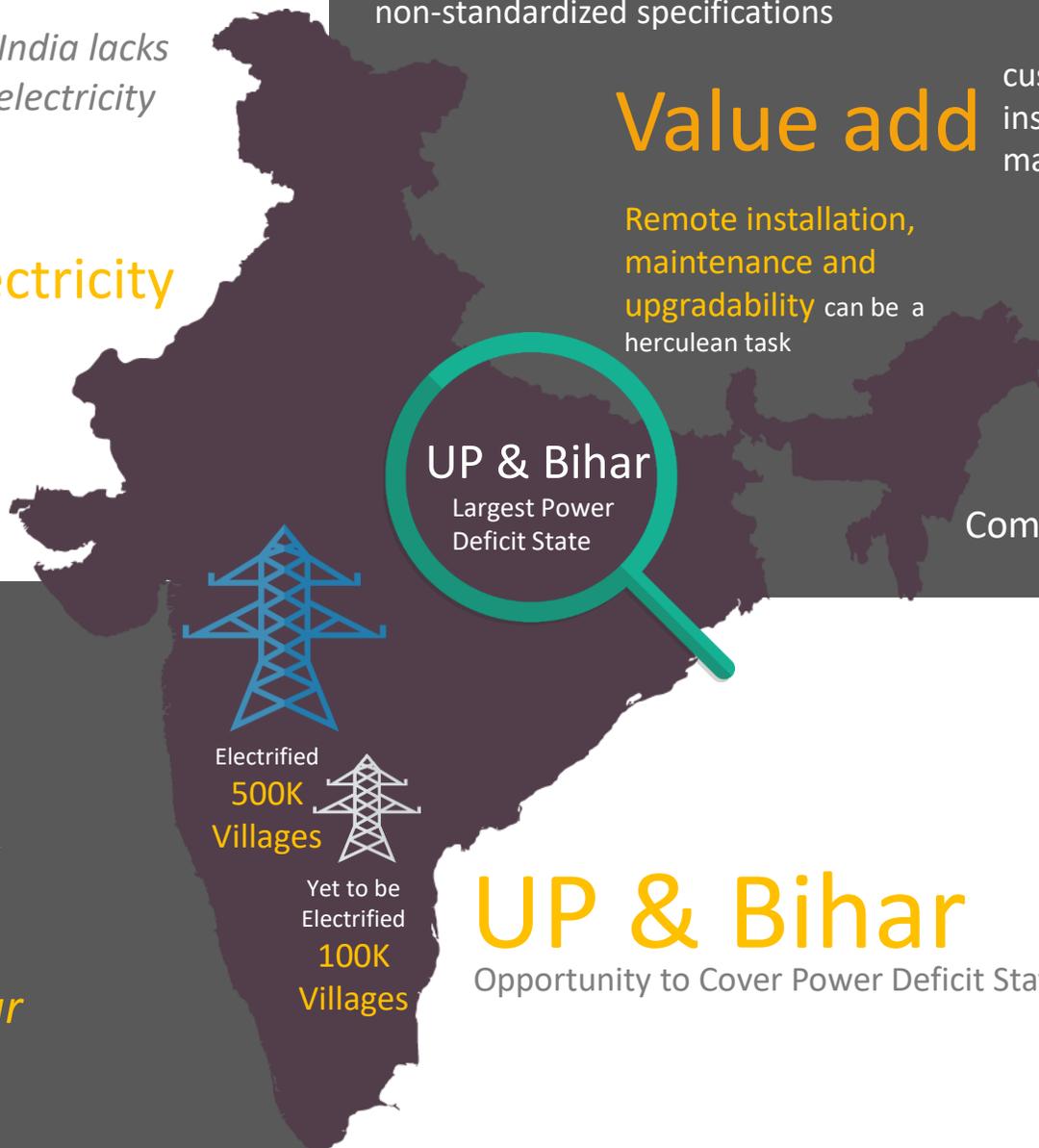
Fragmented solar market
non-standardized specifications

Problems

Value add

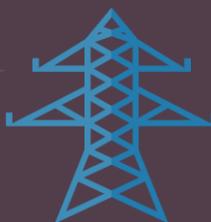
customization, installation maintenance.

Remote installation, maintenance and upgradability can be a herculean task



UP & Bihar
Largest Power Deficit State

Complex system



Electrified **500K Villages**



Yet to be Electrified **100K Villages**

UP & Bihar

Opportunity to Cover Power Deficit State

Solar Saubhagya – Har Ghar Bijli Yojna

“ Electricity to every households thru Solar”

Pradhan Mantri Sahaj Bijli Har Ghar Yojana – ‘Saubhagya’ a new scheme was launched by the Hon’ble Prime Minister on 25th September, 2017. Under Saubhagya free electricity connections to all households in rural areas and poor families in urban areas will be provided.

In case of un-electrified households located in remote and inaccessible areas, solar indoor system with battery bank with a maximum of 5 LED lights, 1 DC Fan, 1 USB port for mobile charging and 1 DC power to plug DC TV/radio will be provided along with 5 years warranty.



SIS 200Wp Solar Indoor System



System

- Solar panel – 100Wp- 200Wp , 15A rating
- Battery – up to 80Ah Lithium Ferro Phosphate
- Charge control unit: MPPT with LCD display
- Output load – 12V DC , max. 7A.
- DC battens : 3W/350lm, 5W/550lm , 7W/900lm
- USB port for Mobile Charging
- DC Fan / DC TV up to 25Watts

Accessories

- Cable, Panel Mtg, switches, battery cabinet to be given by Installer/ Signify

Application

- Rural indoor lighting
- Office & building emergency lighting



*Accessories shown are representative examples only

Solar Saubhagya – Har Ghar Bijli Yojna

“ Electricity to every households thru Solar”

>30,000 Solar home lighting system has been Installed in hundreds of off-grid Villages of Uttar Pradesh and additional 24,000 Installation is in progress



साफ नीयत-सही विकास



**सौभाग्य का सन्देश,
रोशन हुआ उत्तर प्रदेश**

दिनांक 31 दिसम्बर 2018 को प्रदेश के सभी 75 जिलों में
सभी मजदूरों एवं इच्छुक घरों का विद्युतीकरण पूर्ण

उत्तर प्रदेश में वर्तमान सरकार के गठन के बाद माह दिसम्बर 2018 तक

- सभी **2 लाख 84 हजार** मजदूरों को रोशन
- वर्तमान सरकार में **1 लाख 20 हजार** मजदूरों को विद्युतीकृत

विद्युतीकृत मजदूर

- 94 लाख घरों** को मिला बिजली कनेक्शन
- इनमें से **74 लाख घरों** को "सौभाग्य" से मिला बिजली कनेक्शन

विद्युतीकृत घर



सौभाग्य
प्रधानमंत्री सहज बिजली हर घर योजना



अब रोशन होगा मेरा भी घर

हेल्पलाइन: **1912**



प्रधानमंत्री सहज बिजली हर घर योजना
के तहत
श्री/श्रीमती
निवासी ग्राम....., जिला.....
को बिजली कनेक्शन प्रदान किया गया है।

28.04.2018



सौभाग्य
रोशन होगा हर घर, गाँव हो या शहर



Certificate to be issued once household is electrified

LifeLight : 110lm & 200lm solar LED lantern



LiFePO4 Battery
Long Life & Advanced



110 lumen
for 5hrs



Battery
replaceable



Warranty



IP65

Features



Mobile Charging



Three light modes



Rain and Impact Resistant



Multiple Applications



Battery charge indicator



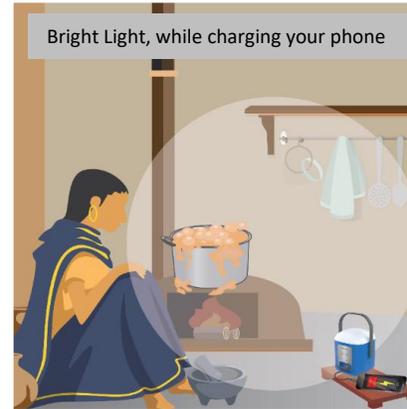
Low-battery
indicator



Battery Replaceable

Replaceable battery is a unique differentiator to **LifeLight**, it adds to the life of product beyond two years warranty, which is highly valued feature to end consumers.

Applications



Bright Light, while charging your phone



Surround white light, with easy portability



Hang it upside down, for everyday safe light



Fit for outdoor use, even in rain.

SIS Compact: Solar *portable home light*

Solar Indoor System : 400lumens & 300lumens

Solar Lamp

Solar panel module



Splitter with USB
for mobile charging



Push switch



Cable Connector
for charging solar
lamp

Hanging ON/OFF & Dimming
switch



- Multi lamp portable solar indoor lighting system
- 4 nos. solar luminaire integrated with charger & battery
- Each DC luminaire will have min 375lm with LED indications for charging & discharging.
- Hanging push button for On/Off & dimming
- Ingress protection rating is IP65
- 3 step manual dimming profile as per below :
 - 100% Light Output – 03Hrs with fully charged
 - 50% Light Output – 06Hrs with fully charged
 - 10% Light Output – 30Hrs with fully charged
- 5m cable with each DC luminaire & one splitter
- 5m cable from solar panel module to splitter
- Replaceable Lithium Ferro Phosphate battery

SIS 30Wp Solar Indoor System



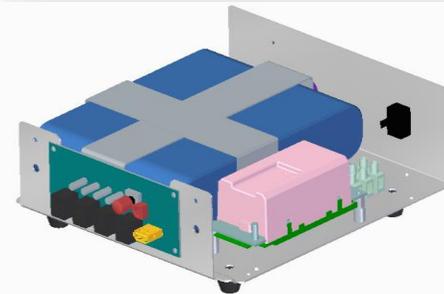
Front



Rear



Layout



Features	Spec. Limits
Charger (CC)	MPPT
PV	30-60Wp @17Vmp
Battery Type	12.8V LFP (internal)
Max Ah	10Ah
Total Load	18W
FAN	10W
Full Load Backup	5.5Hrs
Hybrid	No
LED Load	18Wmax (If fan not connected)
Load Connectors	4 no. of 2mm DC jack
USB	1No. 5V/1A
Indications	4 LEDs, 3 green LED to show state of charge, red for fault or battery deep discharged.
Push Button	LED indications to be ON by push button press.
Fault Diagnosis	Yes, by indication LEDs
Factory Configuration	No
Commissioning Switch	Yes, On/OFF switch on rear side. Cuts off battery connection to solar charge controller and load.
IP Level	IP20

SmartBright : Solar LED street light

Product Image



Application Pictures



Application:

- Village / Rural Road Lighting
- Secondary Road Lighting
- Pedestrian /Path lighting

Key Specifications:

- 12V, 900lm/1200lm/1500lm/1900lm/2100lm (street),Dim
- 12V, 40Wp -100Wp Solar Panel Module
- 12V.8V, 10Ah to 60Ah **LiFePO4** Compatible or
- 12V, 30Ah to 100ah LMLA, T-Gel Compatible
- Integrated **MPPT** Charger + Driver
- Charger Efficiency : > 90%
- Pressure Die-Cast Housing
- High efficiency PC cover
- IP65,CLASS I, CRI>70
- Life L70, 50k Hrs & CCT : 5700K Typical
- Hybrid charger compatible, separate component*
- *Hybrid not applicable for LiFePo4 solutions
- Recommended pole height – 4m /5m/6m

Standards Compliance :

- ✓ IEC 62384 : LED driver performance
- ✓ CISPR 15 : Radio disturbance characteristics
- ✓ IEC 61547 : EMC immunity requirements
- ✓ IEC 60598 : General requirements and tests
- ✓ EN50530 : MPPT Performance tests

>1,50,000 Solar LED street light installed in more than **25,000 off-grid villages** of Uttar Pradesh, Bihar, Jharkhand , Orissa & Assam thru various MNRE solar street light schemes



EESL solar Installation in Ambedkar Nagar, Uttar Pradesh , India



EESL Solar Installation, Mahamunda Punitala Barangir, Odihsa, India

Product

Local entrepreneur team up for remote installations



Empowering
people
with our solar lighting
solution

[Click here to see a video](#)

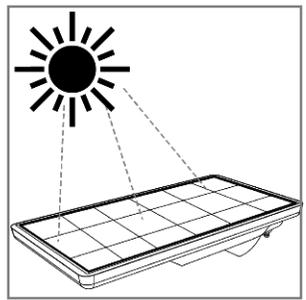
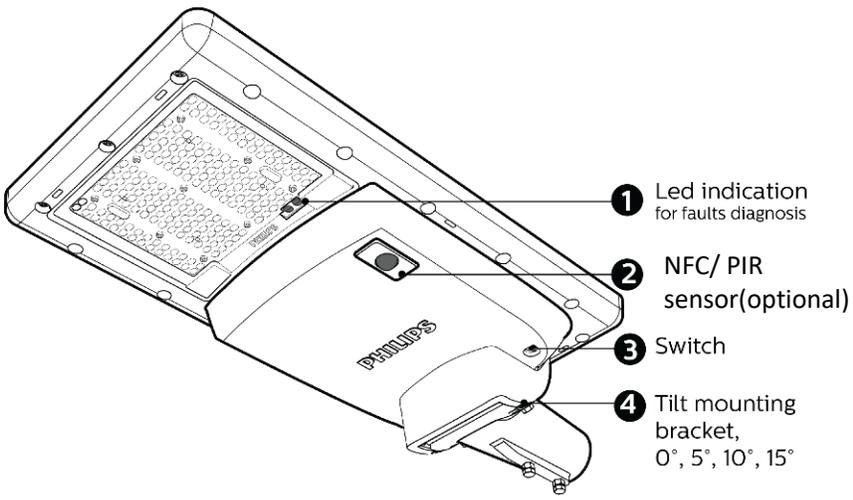
All in one solar integrated streetlight : 2000lm/ 3000lm/ 4500lm/6000lm*



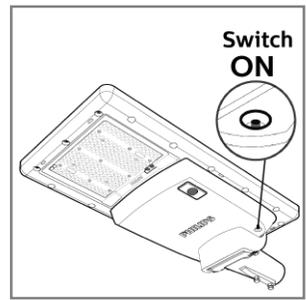
signify

charging time depending on site & weather condition

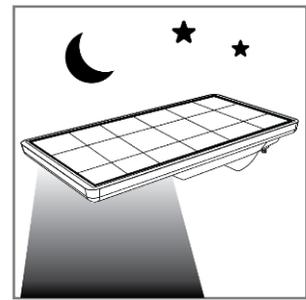
Product functions



Adjust solar Panel facing to sun trajectory to charge the battery fully.



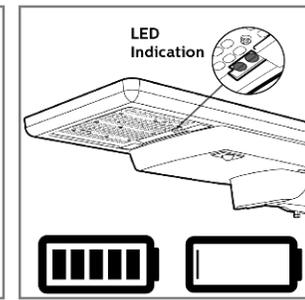
Install and Switch ON the product for no darkness



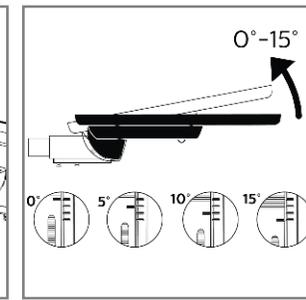
Solar panel senses darkness and it switches on during night automatically



Post Top & lateral mounting options

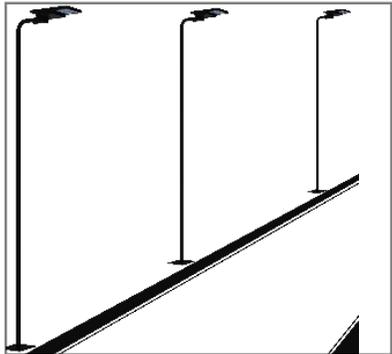


For self diagnosis, LED indications shares the battery condition



Smart pole mount markings, ease angle adjustment

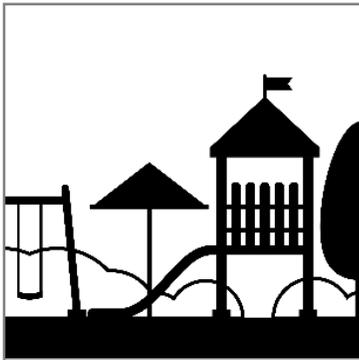
Application Areas:



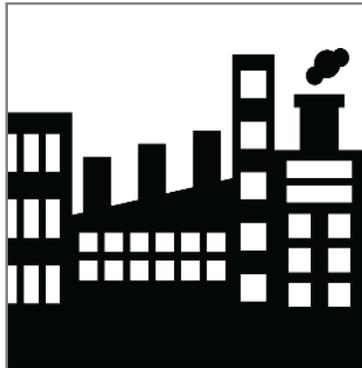
Class B1 & B2
Category roads



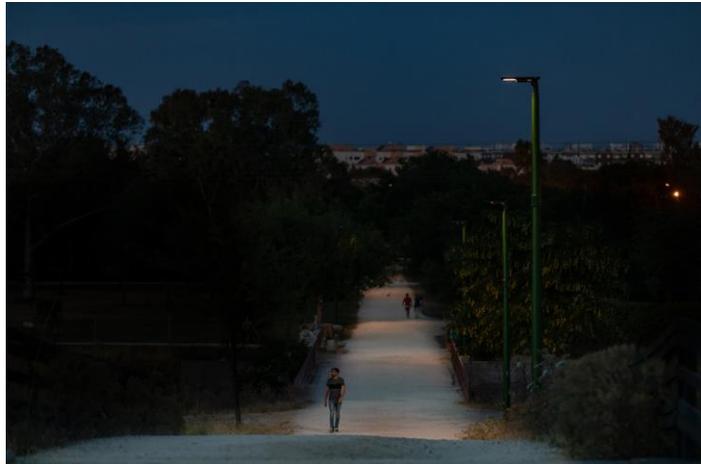
Rural areas villages



Parks



Industries, office,
schools, hospitals



Seville, Spain steps up citizen's safety with Signify's solar integrated street lights (Sunstay)

Signify