

# GENLYTE SOLUTIONS

Efficient lighting  
powered by  
the sun

**LUMEC**

 **GARDCO**

# Why switch to solar lighting?

**Access to light is imperative.  
With solar lighting solutions, off-the-grid communities can access light 24/7.**

## **Why integrate the sun into your outdoor lighting?**

The sun offers clean, free and renewable energy. Captured, stored and distributed, solar energy powers our lighting fixtures by replacing all or part of the electrical consumption from our infrastructure, limiting consumption and grid overload.

## **Quick installation and easy maintenance**

Our standalone solar lighting solutions do not require any trenching, digging or wiring to connect to the grid network. These systems are quick and easy to install without causing significant disruption such as lengthy construction periods, traffic, noise or pollution. Additionally, our luminaires are designed with durable, long-lasting materials that require little to no maintenance.

## **Solar outdoor lighting is now a mature technology**

Solar technology has proven itself in many cities. Solar lighting can be installed anywhere in the US, all year round. Today, solar lighting technology is reliable and can offer a high level of efficiency thanks to the progress made in recent decades (ultra-efficient LED modules, high-capacity batteries, high-efficiency photovoltaic panels). The mastery of this technology allows for easy integration into new installations or retrofit projects.

## **Take action today for the world of tomorrow**

Solar public lighting can be a key success factor in fulfilling your commitment toward a more sustainable society. Standalone, off-grid lighting means no energy is consumed by the grid, resulting in completely carbon-free energy usage with zero carbon emissions during operation. Solar lighting can help the US achieve its ambitious goal for the economy to be net zero by 2050.





Smart solar powered system shown with Lumec RoadFocus Plus luminaire



Smart solar powered system shown with Gardco OptiForm luminaire

## Tailor made solar outdoor lighting solutions to support your sustainability initiatives



- Complete array of optical distributions
- Modular design that can be installed anywhere according to the geolocation conditions, wind speed, seasons and weather
- Integrated MPPT charge controller with built-in LED driver for maximum system efficiency
- On-site monitoring and operating profile programming using a mobile app
- Available with two photovoltaic panels and three battery capacity options
- Pre-tilted bracket for the photovoltaic panel based on geolocation and wind speed to ensure optimum energy capture
- Post-top battery and electronics components box reduces energy loss<sup>1</sup>, simplify installation, enhance aesthetics and protect the system against vandalism
- Whole solar system is UL8801 certified
- Poles meet AASHTO 2001 requirements

1) As compared to installations using longer cables.

# Support Process

From idea to commissioning, Signify can be your consultant and advisor for all the stages of your solar project.



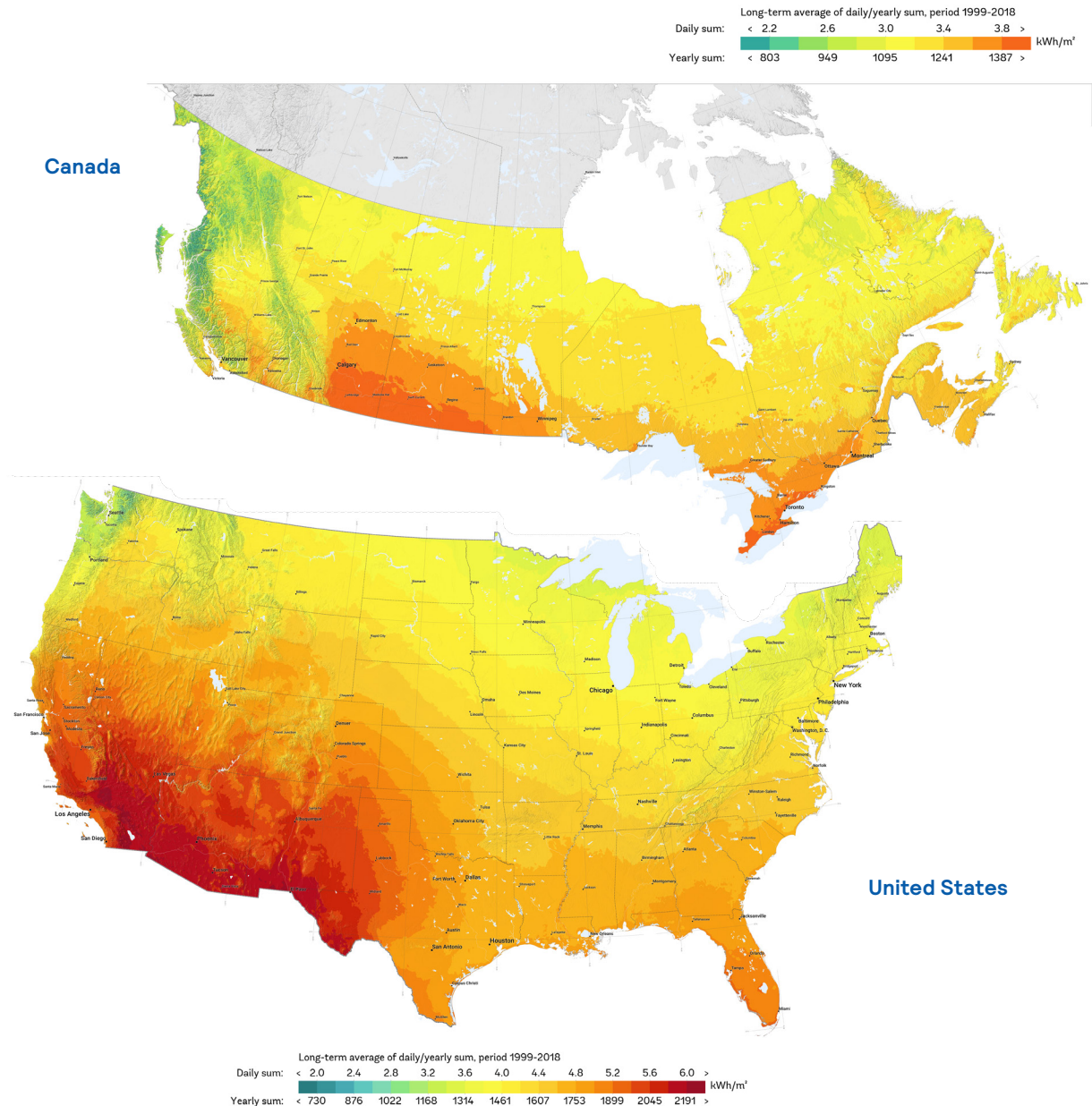
# Solar lighting, how does it work?

The sun is producing  
light every day without  
impacting the planet's  
resources.

To prevent climatological variations,  
Signify's solar solutions are designed  
using irradiance data averaged over 20  
years. This allows sizing of the system  
components to meet the requirements of  
your project, all year round and all across  
the United States.

## About this data

This map provides annual average daily total solar resource using 1998–2016 data (PSM v3) covering 0.038-degree latitude by 0.038-degree longitude (nominally 4 km x 4 km). For more information visit <https://www.nrel.gov/gis/solar-resource-maps.html>





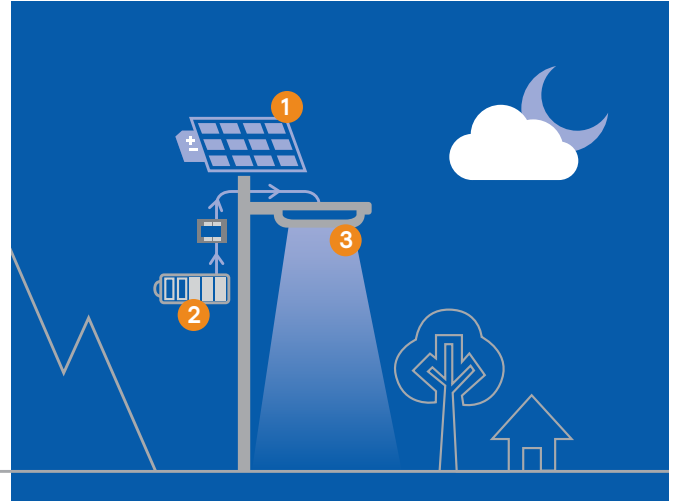
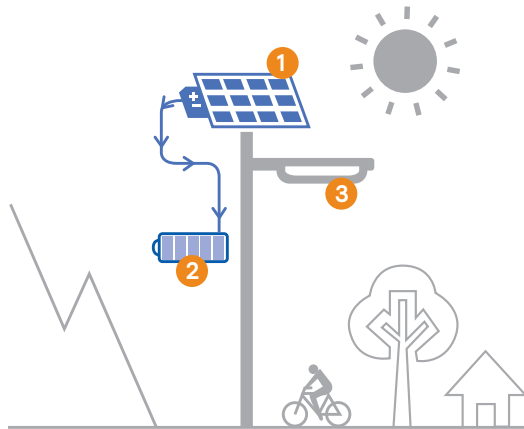
# A closer look



# Off-grid version

Can be installed anywhere without the need to connect to the grid.

- 1 Solar panel
- 2 Battery
- 3 Luminaire



Thanks to its modularity and tailored components, this solution adapts to geological conditions, seasons and weather.

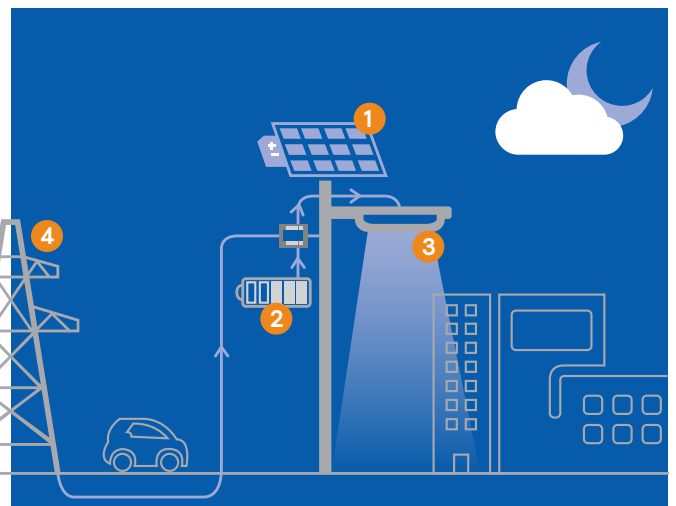
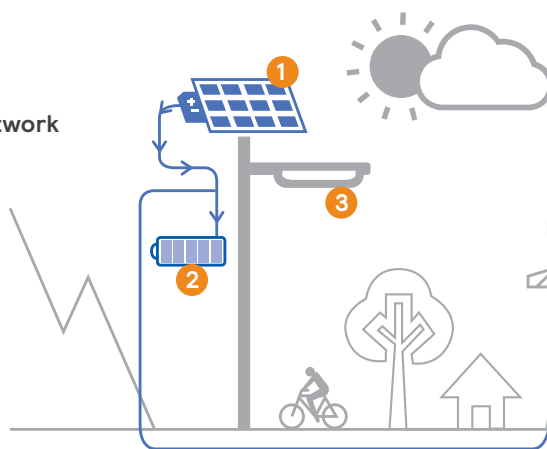
During the day, the battery is charged by the photovoltaic panel that captures the solar energy

At night, the energy stored in the battery is used to power the luminaire and provide lighting

# Hybrid version

The hybrid version is preferred in various scenarios:

- 1 Solar panel
- 2 Battery
- 3 Luminaire
- 4 Electric network



- 1. When installed in regions in which sunlight is limited.
- 2. When the application requires higher lumen output.
- 3. When the operating profile requires more energy throughout the night.
- 4. When there is existing access to the grid that can be utilized.

During the day, the battery is charged by the photovoltaic panel that captures the solar energy

At night, the energy stored in the battery is used to power the luminaire and provide lighting



# RoadFocus Plus

## Smart solar powered system

Tailor made solar road and street lighting solutions to support your sustainability initiatives and reduce your carbon emissions.

Low profile design luminaire with multiple lumen packages and industry leading efficacy

Up to 12,400 lm with efficacy up to 224 lm/W



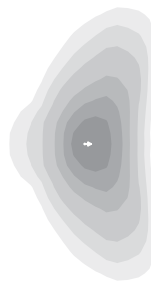
Type 2 Medium



Type 2 Medium  
enhanced back-light



Type 2 Short



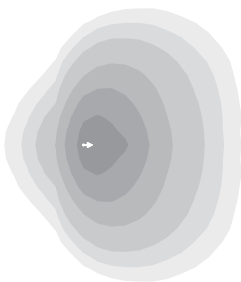
Type 3 Medium



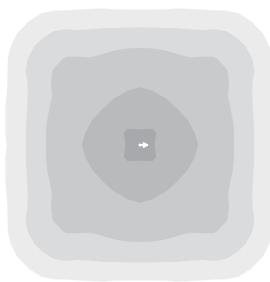
Type 3 Medium  
enhanced back-light



Type 3 Short



Type 4



Type 5

## A wide choice of optical distributions

Signify's wide range of optical distributions can meet photometric requirements for the most challenging applications. Specialty optics and shields are available to illuminate the spaces you need and shield the spaces you don't.



# OptiForm

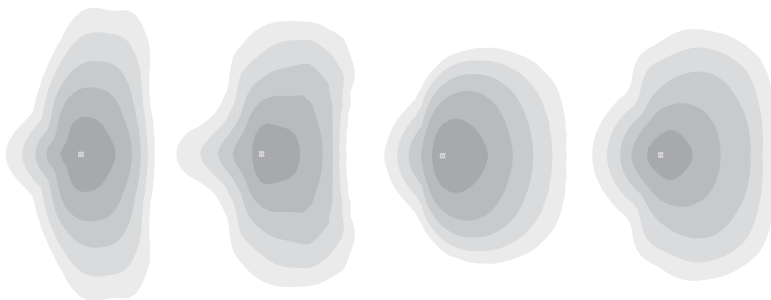
## Smart solar powered system

Tailor made solar site and area lighting solutions to support your sustainability initiatives and reduce your carbon emissions.



Low profile design luminaire with multiple lumen packages and industry leading efficacy

Up to 12,300 lm with efficacy up to 222 lm/W

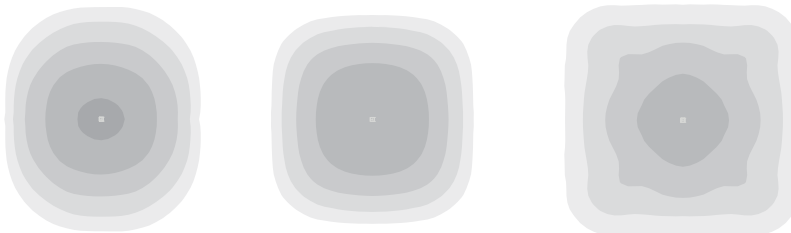


Type 2 Medium

Type 3 Medium

Type 4 Medium

Type 4 Wide



Type 5 Narrow

Type 5 Medium

Type 5 Wide

## A wide choice of optical distributions

Signify's wide range of optical distributions can meet photometric requirements for the most challenging applications. Specialty optics and shields are available to illuminate the spaces you need and shield the spaces you don't.

# Solar Subsystem

## Solar panel

### Easy installation and excellent performance

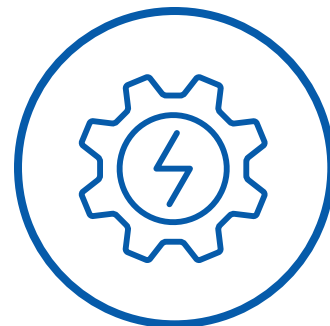
- Mono crystalline type
- Easy to install and maintain
- High efficiency
- Optimized energy capture through pre-tilted anodized aluminum bracket
- Available in 200Wp and 325Wp
- Operating temperature: -40 to 185 °F



## Charge controller

### Smart controller with built-in LED driver

- MPPT technology
- Possibility of controlling systems up to 70W
- Integrated LED driver allows system efficacy up to 224 lm/W
- Integrated protection and control modules
- Field programmable and monitoring using an app
- Battery voltage, depth of discharge, LED power, dimming steps and PV panel peak wattage are configurable



## Crystal battery

### Seamless operation under extreme temperatures

- Capacity: 24V (2x12V) up to 100Ah
- Technology: lead crystal battery (SiO2)
- Cycle life: 2000+ cycles depending on the solar study
- Operating temperature: -30° to 149° F





Smart solar powered  
system shown with  
Lumec Candela luminaire

# Unlimited possibilities

## Modularity opens a world of possibilities for luminaire selection

Integrate almost any Genlyte Solutions luminaire with our solar lighting system. Whether the goal is to illuminate urban streets, pathways or open spaces, the versatility of our system ensures that any luminaire can be seamlessly integrated. Flexibility empowers customers to make lighting choices that not only meet functional needs but also align with desired visual and architectural preferences. The ability to mix and match luminaires within the same solar-powered lighting system ensures that every corner of an outdoor space can be tailored to achieve the desired lighting effect, creating a versatile and dynamic solution for a variety of outdoor applications. Ultimately, the modularity of these systems empowers customers to turn their lighting visions into reality while maximizing energy efficiency and sustainability.

## Applications

- Roads and streets
- Rural areas
- Campsites
- Parks and recreational areas
- Trails
- Pedestrian paths and crossings
- Bus stops
- Cycling paths
- Parking lots
- Campuses
- Schools
- Commercial and industrial areas
- Security lighting
- Emergency and disaster relief





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Signify North America Corp.  
400 Crossing Blvd, Suite 600  
Bridgewater, NJ 08807  
Telephone: 800-555-0050

Signify Canada Ltd.  
281 Hillmount Road,  
Markham, ON, Canada L6C 2S3  
Telephone: 800-668-9008

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