Professional and Premium Solar Packages

Flagpole lighting is designed to offer around the clock illumination for the flags that you hold dearly. However, this requires a constant power source that can be difficult logistically and if you are not careful it can cost a fortune in terms of electricity. Solar lighting provides a wonderful alternative to this that can offer you the lighting that you need without breaking the bank.

Solar lights for flagpoles draw power from the sun during the day and store it to illuminate your flagpoles at night. If your flagpole is set up to receive this sunlight, these solar lights can be the perfect sustainable solution that will stand the test of time. It also becomes a replenishing power source that does not put any additional pressure on your utility bill. It is a great option for so many use cases and here at Flagpole Warehouse, we have gone out of our way to curate an array of different solar lights for your needs.

When deciding on the right product for your project, it is important to understand your power needs, the positioning of the flagpole itself, how much sun it is likely to get, your design preferences, and the functionality that you require. When you combine all these factors, you can narrow your choice to a solar lighting setup perfect for what you are looking for.

Introducing Our Next-Generation Solar Packages

We are committed to continuous innovation and providing our customers with innovative solar solutions that deliver unparalleled performance, reliability, and ease of use. After extensive research and development, we are excited to unveil our new line of Professional and Premium Solar Packages, designed to revolutionize the way you harness the power of the sun.

Professional and Premium Solar Packages

Engineered for Optimal Performance and Longevity

Our next-generation Solar Packages feature a range of advanced components meticulously selected to maximize efficiency, durability, and user-friendliness. At the heart of these packages lies a powerful solar panel, available in 50W (Professional) and 100W (Premium) configurations, ensuring ample energy generation to meet your needs.

Professional and Premium Solar Packages

Innovative Battery Technology for Reliable Power Storage

We have introduced state-of-the-art Lithium Iron Balanced Battery Blocks, offering 20Ah (Professional) and 30Ah (Premium) capacities. These battery blocks feature an integrated balancing circuit, ensuring optimal charging and extended battery life. Furthermore, they are easily field-replaceable, making maintenance a breeze.

Foolproof Connections for Seamless Installation

Our Solar Packages incorporate one-way electrical quick connectors, eliminating the risk of incorrect connections and ensuring a hassle-free setup process. Additionally, we have included an inline field-replaceable fuse, providing an extra layer of protection against electrical hazards.

User-Friendly Design for Convenience

Understanding the importance of clear communication, we have developed new user-friendly instructions, guiding you through every step of installation and operation. Our goal is to make harnessing solar power as simple and straightforward as possible.

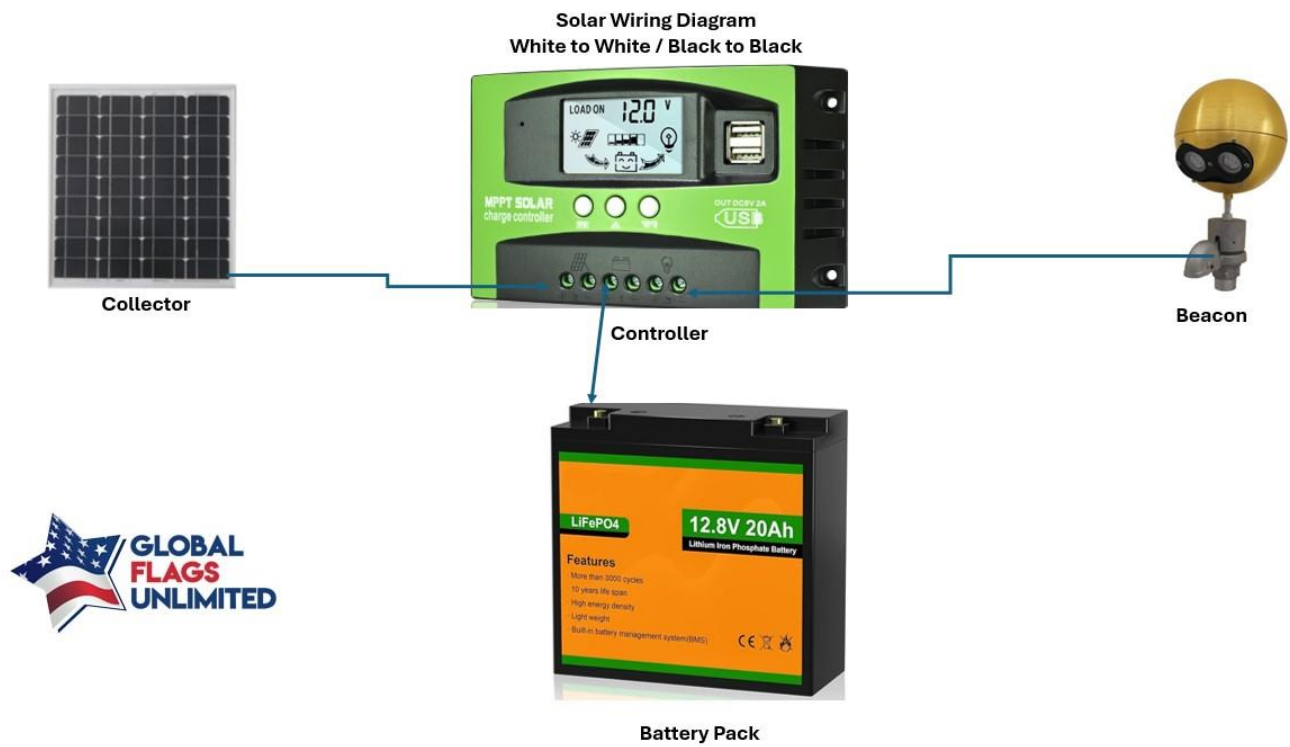## Optional 120V Plug-in Charger

To further enhance convenience, we are offering an optional 120V plug-in charger for our distributors and end-users. This charger allows you to recharge the battery block when necessary, ensuring your solar package is always ready for deployment.

We believe in continuous improvement and innovation. Our new Professional and Premium Solar Packages represent our commitment to providing you with reliable, high-performance solar solutions that seamlessly integrate into your Beacon deployments.

Basic Wiring Diagram of the Solar Power Package:

Solar Wiring Diagram
White to White / Black to Black

Collector

Controller

Beacon

GLOBAL FLAGS UNLIMITED

LiFePO4   **12.8V 20Ah**
Lithium Iron Phosphate Battery

Features
More than 3000 cycles
10 years life span
High energy density
Light weight
Built-in battery management system(BMS)

Battery Pack

=

Peak Sun Hours

One peak sun hour is when the sun's intensity reaches an average of 1,000 watts of photovoltaic power per square meter. It is different from one hour on the clock. Instead, it is a measure of the amount of time the sun's rays are most powerful in a given area, which means it is the amount of time you can maximize electricity generation with your solar panels.
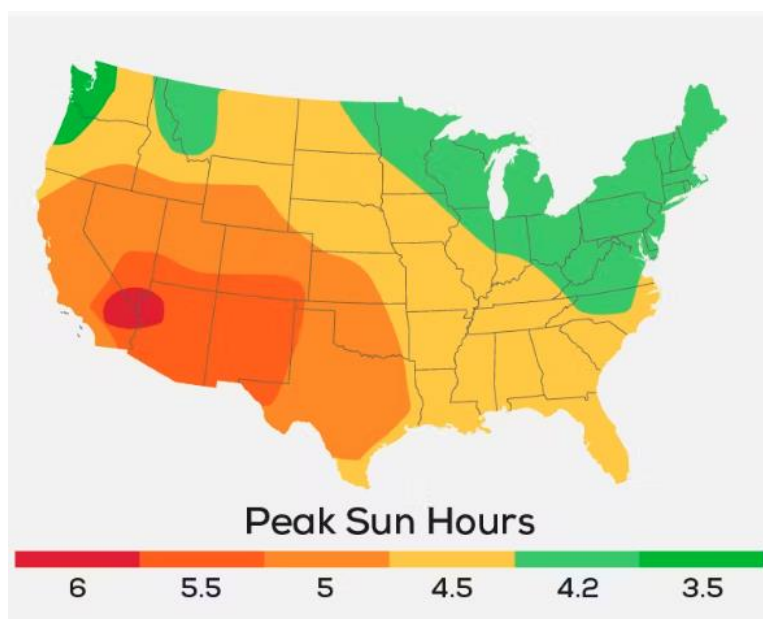
In scientific terms:

1 peak sun hour = 1000 W/m^2 (or 1 kW/m^2) of sunlight per hour.

Knowing the peak sun hours for your region can help you determine the Solar Package you need for your Beacon.

FLAGco

Professional and Premium Solar Packages

Peak Sun Hours

| Peak sun hours required to reach full charge			
Battery Ah	Panel Wattage:	50W	100W
20	Professional	4.8	2.4
30	Premium	7.2	3.6
Charging current should be 10% of Amp/Hr. rating			

Professional and Premium Solar Packages

Amp Hours

Ampere hours -- sometimes abbreviated as Ah or amp hours -- is the amount of energy charge in a battery that enables 1 ampere of current to flow for one hour. Another way of saying it is that 1 Ah is the rating indicating how much amperage a battery can provide for one hour.

Why does that matter for choosing your Beacon Solar Package?

Different Beacons use differing amounts of power (Amps) depending on the number of lamps and the wattage of the bulbs. This chart shows which Beacons combined with which Solar Package will yield a certain number of hours of operation without sunlight. Do you need your Beacon to illuminate overnight or over several nights with minimal sun over several days?

Beacon Configurations / Solar Power Package	Professional	Premium
Standard 12v Beacon with two 5W lamps:	24 Hours	36 Hours
Beacon Plus 12v with two 5w & two 2W lamps:	16 Hours	22 Hours
Beacon Quad 12v with four 5w lamps:	11 Hours	17 Hours
Beacon Quad Plus 12v with four 5w & two 2W lamps:	10 Hours	15 Hours

*Assumes starting with a full charge

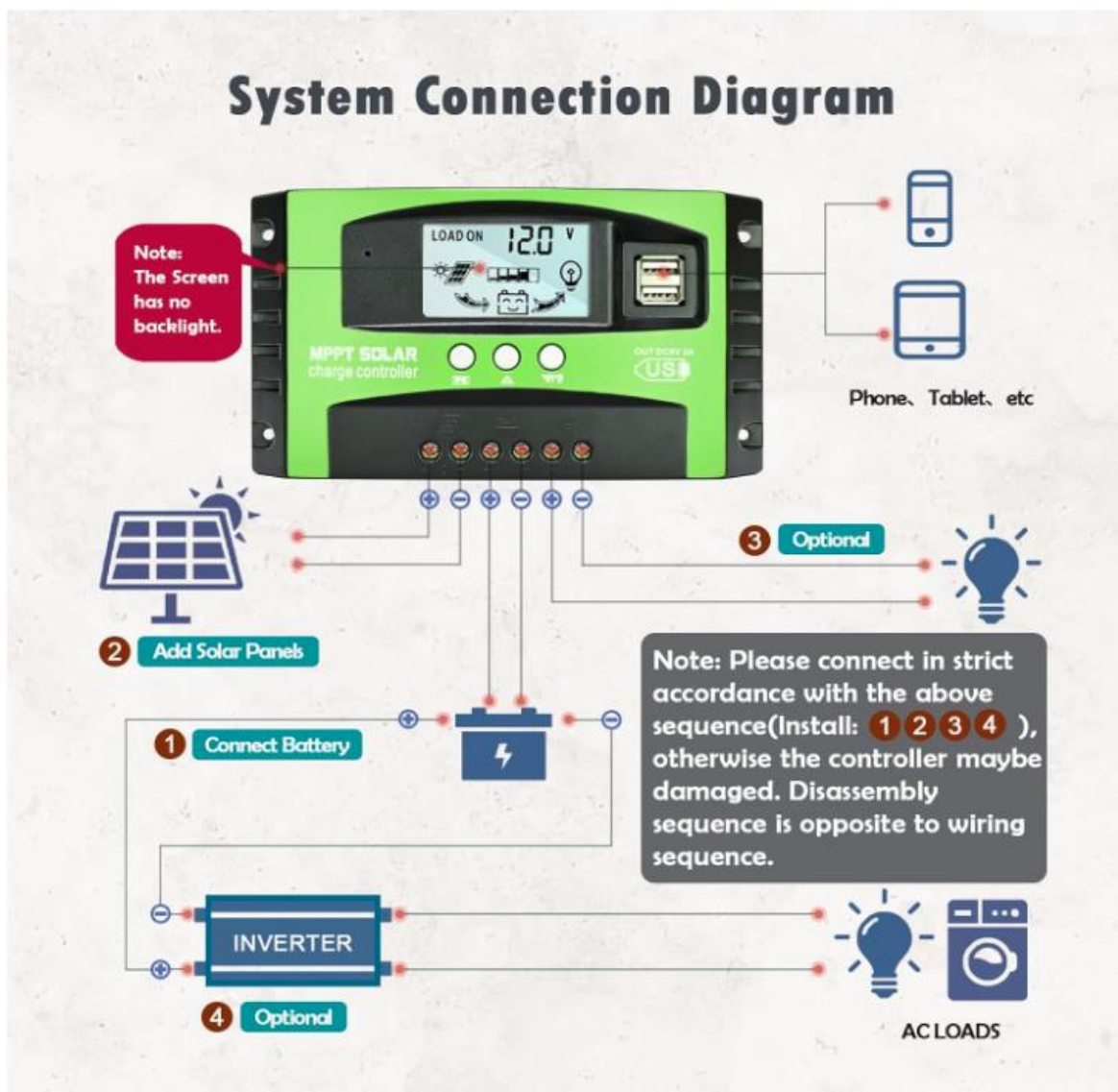Proudly Made in Georgia in the USA
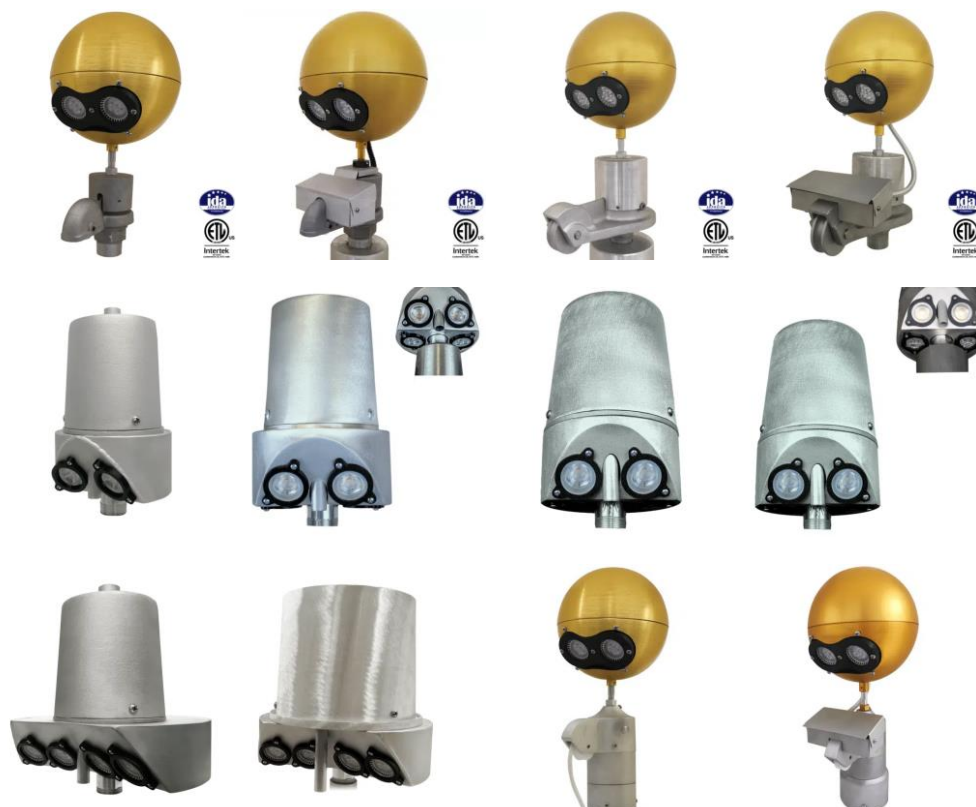
Professional and Premium Solar Packages

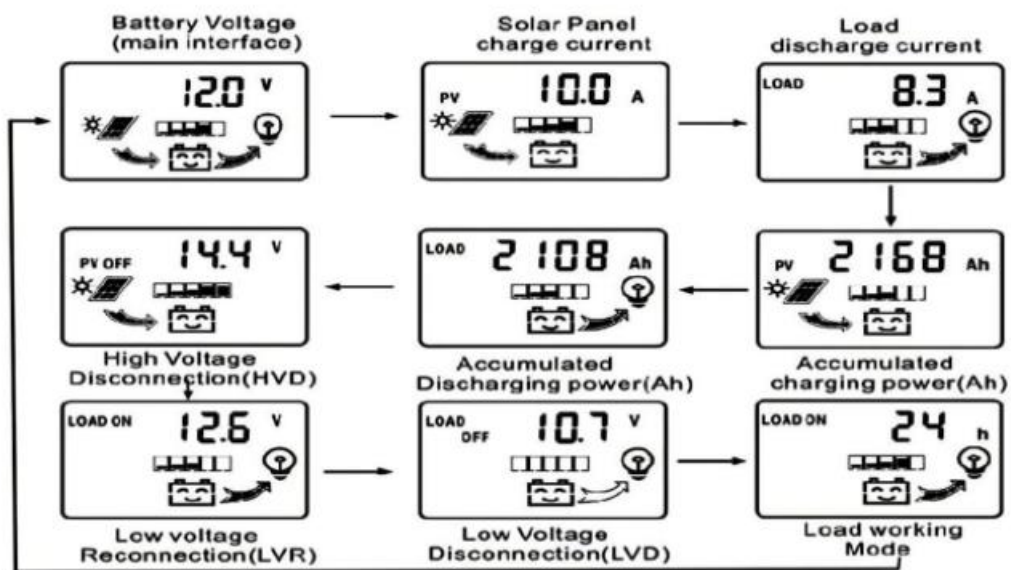## Power up steps for your Professional and Premium Solar Packages

1. Connect Battery to Controller
2. Change settings as described on the next page
3. Connect Solar Collector (panel) to Controller
4. Connect Beacon (load) to Controller

Professional and Premium Solar Packages

Settings (step 2)

- Battery Type: **B3** (**default setting is B1 change immediately to B3**)
- Charging Voltage: 14.8 max
- Low voltage reconnection: 12.0 min
- Low voltage disconnection: 10.7 min
- Load working mode: **0 Hr.** (not 24hr for proper Beacon functionality)

LCD Display/Setting

Battery Voltage (main interface)

Solar Panel charge current

Load discharge current

High Voltage Disconnection(HVD)

Accumulated Discharging power(Ah)

Accumulated charging power(Ah)

Low voltage Reconnection(LVR)

Low Voltage Disconnection(LVD)

Load working Mode

Set Parameter

In interface 2-5, press and hold ⬆ for five seconds, restoring defaults. Press and hold key 🔲 for five seconds, into manual settings,the number will flash at this time,press ⬆ and ⬇ to adjust parameter values, when finished,press key 🔲 for three seconds to exit the setting.