



20W 15.7" / 40W 15.7" / 60W 15.7" 80W 15.7" / 100W 22.24" / 120W 22.24"



#### **Features**

- IP68 Rated
- Anti Black Out Intelligent Management
- Extreme Temp Rating: -4°F to 149°F
- 97% Charging Efficiency

Our Pollux Solar Area Light is economical, easy to install, completely off grid, unique new design with all the solar lighting advantages is great solution for area such as pathway, parking lot, roadway, trails or any remote area that have no access to conventional Power. Our Pollux features an integrated solar panel, battery and Light fixture with easy to install mounting eliminates trenching to bury electrical wires and the savings continues since there is no monthly electrical bill.

- Economical, Easily to install, all in one integrated with fixture on one side and panel on the other side.
- Philips High Efficiency LEDs with heat dissipation design, pure aluminum lamp base with seal lens for an optimal lighting and life span.
- Batwing Lens for a perfect illumination and uniformity
- The light automatically switches on at dusk and switches off at dawn. 30% permanent lighting, when motion is detected power turns to 100%.
- Eco-Friendly and safe LifePO4 battery and discharge over 2000 times has life span of more then 10 years
- MPPT controller automatically track the maximum power point according to the weather variation, charging rate 16 to 30%
- 140 Lumen per watt and IP65 Rated
- 5 Years limited warranty on all components
- Battery Life Span Over 10 Years
- IR Remote Control Monitoring
- Anti-Theft Hardware
- 4 Levels of Dimming Design & Auto Identify Day/Night





#### **Specifications**

Model #	SKU #	Power	PV Type	Solar Panel	Lithium Battery	Lumens	CCT	Charge Time (Hrs)	Weight (Lb)	Installation Height (Ft)
AVS-PR0-20W	990101	20W	MONO	60W	18AH	2800LM	5000K	6-7 Hrs	27.5	15
AVS-PRO-40W	990102	40W	MONO	72W	24AH	5600LM	5000K	6-7 Hrs	34.78	20
AVS-PRO-60W	990103	60W	MONO	105W	42AH	8400LM	5000K	6-7 Hrs	51.8	20
AVS-PRO-80W	990104	80W	MONO	105W	52AH	11000LM	5000K	6-7 Hrs	54.01	25
AVS-PR0-100W	990106	100W	MONO	140W	62AH	14000LM	5000K	6-7 Hrs	60.17	25
AVS-PR0-120W	990107	120W	MONO	140W	72AH	16800lm	5000K	6-7 Hrs	62.37	30
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- Parking Lots
- Highways
- Sidewalks

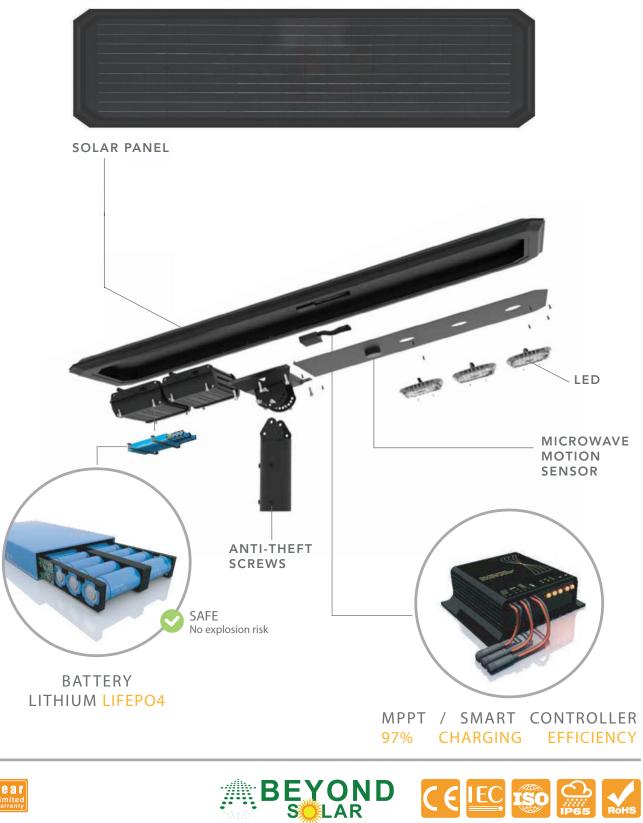
with natural air flow







#### **Product Design and Benefits**







#### **Motion Sensor**

#### PIR OR MICROWAVE SENSOR

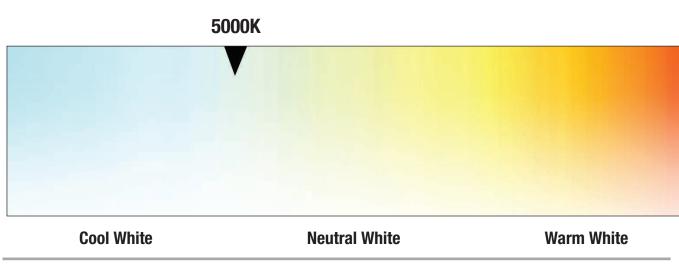
The light automatically switches ON at dusk and switches OFF at dawn. 50% permanent lighting, when presence is detected power turn to 100%.





Optimal component calibration and intelligent management system Selection of the latest and highest component technology

#### **Correlated Color Temperature**







-4°F to 149°F

#### Lithium LifeP04 Battery

The Solar All in One PRO Street Light is equipped with Iron Phosphate Lithium LiFePo4 battery. This technology has proved to be **the best chemical technology for solar** application on the market.

With a cycle life of over 4000 Cycles @ 80% DOD, the battery enjoys over 10 years lifetime.

#### EASY MAINTENANCE & ANTI THEFT SCREWS

**Easy and direct access to the battery** casing for maintenance. The fixation are made with **anti theft screws**, which request special tooling to unscrew.

#### ELECTRONIC PROTECTION BATTERY MANAGEMENT SYSTEM (BMS)



The electronic algorithm **protects the battery** from operating outside its safe area. Monitoring its state, calculating secondary data, reporting that data, controlling its environment, authenticating it and / or balancing it.

#### The BMS offers MULTI PROTECTION :

OVER/UNDER LOADOVER/UNDER CURRENTOVER/UNDER VOLTAGE

OVER CHARGE & DISCHARGE TEMPERATURE MANAGEMENT

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#### EXTREME TEMPERATURE DOWN TO 14°F.

Standard Lithium LiFePo4 batteries have a working temperature range from 14°F to 158°F.

#### **5 YEARS WARRANTY** With **Full battery Replacement**.





#### ALUMINUM WATERPROOF CASING & NATURAL AIRFLOW

High temperatures greatly affect the battery's lifetime. This is why our batteries are encapsulated in an aluminum waterproof casing for a perfect heat dissipation.

In addition to that, the casing enjoy a natural airflow which keeps the battery to ambient temperature.







#### **Smart MPPT Controller**

The Solar All in One PRO Street Light is equipped with a High Quality MPPT Controller, using **top technology semiconductors**.

#### **FEATURES**

**HIGH TRANSFER EFFICIENCY** Charging efficiency up to 98%

MINIMAL STAND-BY POWER CONSUMPTION Current consumption ≤ 10mA

**INTELLIGENT BATTERY MANAGEMENT 3 Phases charging** : MPPTT Charge / Constant Voltage /Floating Voltage.

**INTELLIGENT LED DRIVER** Auto detecting of Dusk and Dawn for automatic operation, 7 Lighting Programs Configuration.





**ANTI BLACK OUT** : Load adjust according to battery capacity assuring all night long lighting in any weather conditions.

#### BATTERY & SYSTEM PROTECTION :

- OVER / UNDER LOAD
- OVER / UNDER CURRENT
- OVER / UNDER VOLTAGE
- OVER CHARGE & DISCHARGE
- TEMPERATURE MANAGEMENT









#### AVS-PRO-20W

LED POWER		20 WATT
LUMINOUS FLUX		3000 LUMENS
LIGHTING	•	
Efficiency		150 LUMENS / WATT
Chips		PHILIPS LUXEON
LED Lifetime		OVER 50000 HOURS LM80
Lighting Angle		99,2 DEGREE
Light Height		9.8 FT TO 13.1 FT
STORAGE	•	
Technology		LITHIUM IRON PHOSPHATE LIFEPO4 - 26650
Capacity		18 AH 12.8 VOLTS
Autonomy		OVER 24 HOURS AT FULL CHARGE - 4 RAINY DAYS BACK UP
Charging time		6-7 HOURS
Lifespan		OVER 4000 CYCLES @ 80% DOD OVER 10 YEARS LIFETIME
Working Temp.		14°F TO 158°F
ENERGY		
Solar panel		<b>60</b> WATTS /18V
Cells type		MONOCRYSTALINE PANEL GRADE A 25 YEARS
Certificates		IEC 61215 ; IEC 61730 I AND II ; IEC 60904
ELECTRONIC		
Controller		MPPT SMART CONTROLLER (REMOTE MONITORING OPTIONAL)
Sensor		MICROWAVE 360 DEGREE MOTION SENSOR
Cabling		WATERPROOF CONNECTOR, PLUG AND PLAY
Protection		OVER LOAD/CURRENT/TEMP°/VOLTAGE/CHARGE/DISCHARGE
Certificates		EN 55015 ; EN 61000
MECHANICAL		
EPA ( m2/ ft2 )		0,280 / 3,01
Wind Load Rate		111.847 MPH
Pole Mounting Ø		3.50394 IN





#### AVS-PRO-40W

LED POWER	40 WATT
LUMINOUS FLUX	6000 LUMENS
LIGHTING	
Efficiency	150 LUMENS / WATT
Chips	PHILIPS LUXEON
LED Lifetime	OVER 50000 HOURS LM80
Lighting Angle	99,2 DEGREE
Light Height	13.1 FT TO 16.4 FT
STORAGE	
Technology	LITHIUM IRON PHOSPHATE LIFEPO4 - 26650
Capacity	24 AH 12.8 VOLTS
Autonomy	OVER 24 HOURS AT FULL CHARGE - 4 RAINY DAYS BACK UP
Charging time	6-7 HOURS
Lifespan	OVER 4000 CYCLES @ 80% DOD OVER 10 YEARS LIFETIME
Working Temp.	14°F TO 158°F
ENERGY	
Solar panel	72 WATTS /18V
Cells type	MONOCRYSTALINE PANEL GRADE A 25 YEARS
Certificates	IEC 61215 ; IEC 61730 I AND II ; IEC 60904
ELECTRONIC	
Controller	MPPT SMART CONTROLLER (REMOTE MONITORING OPTIONAL)
Sensor	MICROWAVE 360 DEGREE MOTION SENSOR
Cabling	WATERPROOF CONNECTOR, PLUG AND PLAY
Protection	OVER LOAD/CURRENT/TEMP°/VOLTAGE/CHARGE/DISCHARGE
Certificates	EN 55015 ; EN 61000
MECHANICAL	
EPA ( m2/ ft2 )	0,330 / 3,55
Wind Load Rate	111.847 MPH
Pole Mounting Ø	3.50394 IN





#### AVS-PRO-60W

LED POWER		60 WATT
LUMINOUS FLUX		9000 LUMENS
LIGHTING		
Efficiency		150 LUMENS / WATT
Chips		PHILIPS LUXEON
LED Lifetime		OVER 50000 HOURS LM80
Lighting Angle		99,2 DEGREE
Light Height		19.7 FT TO 26.2 FT
STORAGE		
Technology		LITHIUM IRON PHOSPHATE LIFEPO4 - 26650
Capacity		42 AH 12.8 VOLTS
Autonomy		OVER 24 HOURS AT FULL CHARGE - 4 RAINY DAYS BACK UP
Charging time		6-7 HOURS
Lifespan		OVER 4000 CYCLES @ 80% DOD OVER 10 YEARS LIFETIME
Working Temp.		14°F TO 158°F
ENERGY	•	
Solar panel		<b>105</b> WATTS /18V
Cells type		MONOCRYSTALINE PANEL GRADE A 25 YEARS
Certificates		IEC 61215 ; IEC 61730   AND II ; IEC 60904
ELECTRONIC	•	
Controller		MPPT SMART CONTROLLER (REMOTE MONITORING OPTIONAL)
Sensor		MICROWAVE 360 DEGREE MOTION SENSOR
Cabling		WATERPROOF CONNECTOR, PLUG AND PLAY
Protection		OVER LOAD/CURRENT/TEMP°/VOLTAGE/CHARGE/DISCHARGE
Certificates		EN 55015 ; EN 61000
MECHANICAL		
EPA ( m2/ ft2 )		0,350 / 3,77
Wind Load Rate		111.847 MPH
Pole Mounting Ø		3.50394 IN







#### AVS-PRO-80W

LED POWER	80 WATT
LUMINOUS FLUX	12000 LUMENS
LIGHTING	
Efficiency	150 LUMENS / WATT
Chips	PHILIPS LUXEON
LED Lifetime	OVER 50000 HOURS LM80
Lighting Angle	99,2 DEGREE
Light Height	19.7 FT TO 26.2 FT
STORAGE	
Technology	LITHIUM IRON PHOSPHATE LIFEPO4 - 26650
Capacity	52 AH 12.8 VOLTS
Autonomy	OVER 24 HOURS AT FULL CHARGE - 4 RAINY DAYS BACK UP
Charging time	6-7 HOURS
Lifespan	OVER 4000 CYCLES @ 80% DOD OVER 10 YEARS LIFETIME
Working Temp.	14°F TO 158°F
ENERGY	
Solar panel	<b>105</b> WATTS /18V
Cells type	MONOCRYSTALINE PANEL GRADE A 25 YEARS
Certificates	IEC 61215 ; IEC 61730 I AND II ; IEC 60904
ELECTRONIC	
Controller	MPPT SMART CONTROLLER (REMOTE MONITORING OPTIONAL)
Sensor	MICROWAVE 360 DEGREE MOTION SENSOR
Cabling	WATERPROOF CONNECTOR, PLUG AND PLAY
Protection	OVER LOAD/CURRENT/TEMP°/VOLTAGE/CHARGE/DISCHARGE
Certificates	EN 55015 ; EN 61000
MECHANICAL	
EPA ( m2/ ft2 )	0,350 / 3,77
Wind Load Rate	111.847 MPH
Pole Mounting Ø	3.50394 IN





#### AVS-PRO-100W

LED POWER		100 WATT
LUMINOUS FLUX		15000 LUMENS
LIGHTING		
Efficiency		150 LUMENS / WATT
Chips		PHILIPS LUXEON
LED Lifetime		OVER 50000 HOURS LM80
Lighting Angle		116 DEGREE
Light Height		19.7 FT TO 26.2 FT
STORAGE		
Technology		LITHIUM IRON PHOSPHATE LIFEPO4 - 26650
Capacity		62 AH 12.8 VOLTS
Autonomy		OVER 24 HOURS AT FULL CHARGE - 4 RAINY DAYS BACK UP
Charging time		6-7 HOURS
Lifespan		OVER 4000 CYCLES @ 80% DOD OVER 10 YEARS LIFETIME
Working Temp.		14°F TO 158°F
ENERGY		
Solar panel		<b>140</b> WATTS /18V
Cells type		MONOCRYSTALINE PANEL GRADE A 25 YEARS
Certificates		IEC 61215 ; IEC 61730   AND II ; IEC 60904
ELECTRONIC	•	
Controller		MPPT SMART CONTROLLER (REMOTE MONITORING OPTIONAL)
Sensor		MICROWAVE 360 DEGREE MOTION SENSOR
Cabling		WATERPROOF CONNECTOR, PLUG AND PLAY
Protection		OVER LOAD/CURRENT/TEMP°/VOLTAGE/CHARGE/DISCHARGE
Certificates		EN 55015 ; EN 61000
MECHANICAL		
EPA ( m2/ ft2 )		0,360 / 3,88
Wind Load Rate		111.847 MPH
Pole Mounting Ø		3.50394 IN







#### AVS-PRO-120W

LED POWER		120 WATT
LUMINOUS FLUX		18000 LUMENS
LIGHTING		
Efficiency		150 LUMENS / WATT
Chips		PHILIPS LUXEON
LED Lifetime		OVER 50000 HOURS LM80
Lighting Angle		116 DEGREE
Light Height		19.7 FT TO 26.2 FT
STORAGE		
Technology		LITHIUM IRON PHOSPHATE LIFEPO4 - 26650
Capacity		72 AH 12.8 VOLTS
Autonomy		OVER 24 HOURS AT FULL CHARGE - 4 RAINY DAYS BACK UP
Charging time		6-7 HOURS
Lifespan		OVER 4000 CYCLES @ 80% DOD OVER 10 YEARS LIFETIME
Working Temp.		14°F TO 158°F
ENERGY		
Solar panel		<b>140</b> WATTS /18V
Cells type		MONOCRYSTALINE PANEL GRADE A 25 YEARS
Certificates		IEC 61215 ; IEC 61730   AND II ; IEC 60904
ELECTRONIC		
Controller		MPPT SMART CONTROLLER (REMOTE MONITORING OPTIONAL)
Sensor		MICROWAVE 360 DEGREE MOTION SENSOR
Cabling		WATERPROOF CONNECTOR, PLUG AND PLAY
Protection		OVER LOAD/CURRENT/TEMP°/VOLTAGE/CHARGE/DISCHARGE
Certificates		EN 55015 ; EN 61000
MECHANICAL	•	
EPA ( m2/ ft2 )		0,360 / 3,88
Wind Load Rate		111.847 MPH
Pole Mounting Ø		3.50394 IN



5 Year Limited



#### **Light Distribution**







ISO



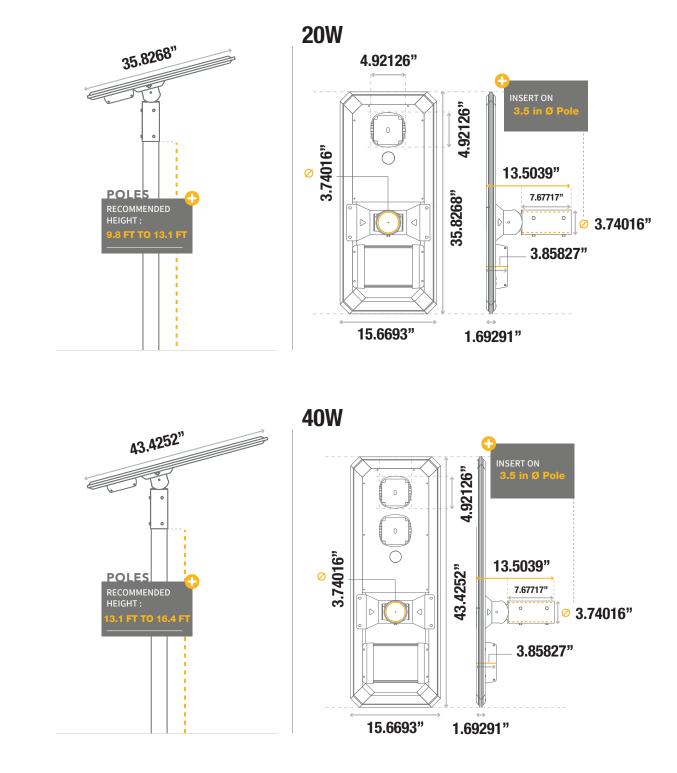
#### **Light Distribution**







#### **Dimensions**



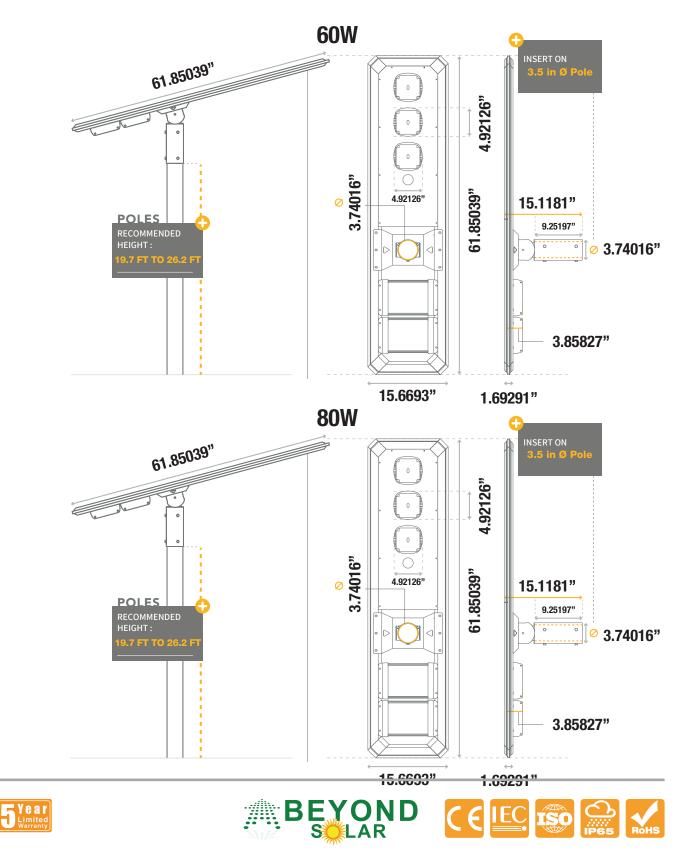




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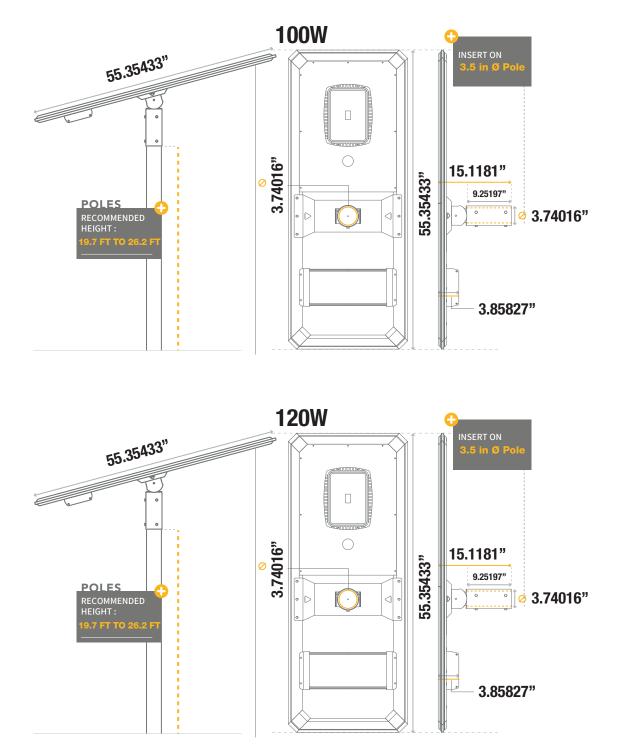


#### **Dimensions**





#### **Dimensions**







5 Year

ISO

CE



#### Installation

The installation can be adjusted according to different environments or illumination needs.



## SOLAR AREA LIGHT

#### EASY INSTALLATION JUST INSERT ON THE TOP OF A POLE







#### **Optimum Panel Orientation**

The Solar charge in a battery pack won't last forever. The off–grid system relies on stored solar energy for autonomy. Angling your solar panels properly can boost the power intake of your solar lighting system. You want to angle your solar panels at a tilt based on the area's latitude.

#### **Tip for Maximum Power**

You can increase the tilt 15° in the winter or decrease 15° in the summer. In this way you can get the maximum sunlight to recharge the battrey.

# Worst

**Best Facing Direction of Solar Panel** 

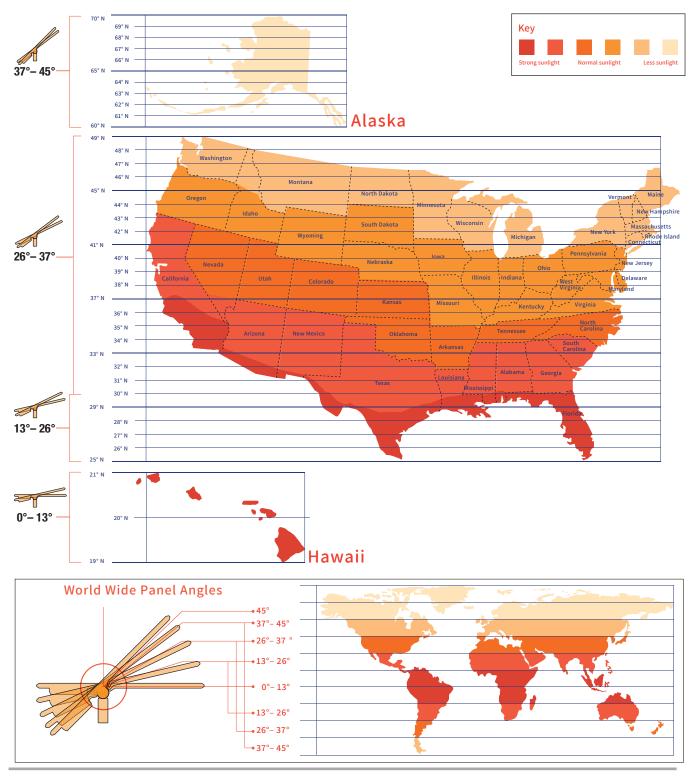
The area will dictate the installation of the fixtures and will sometimes prevent the lights from facing south. Panels facing West & East won't get as much light as Southern facing panels, but will stillcollect a good amount of sunlight. A North facing panel also works, but it will take longer to charge than any other direction. This would mean that the solar charge will be less optimal if installations are facing North.







#### **Optimum Panel Orientation**







#### Packaging







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#### **Application**





