



Solar Streetlite™

americanlite®

We light your world™





Dynamo Pro™ Series

30w/40w/50w/60w/80w
100w/120w/150w/200w



Renewable energy is what occurs as the sun rises each day. One of the main functions of outdoor lighting is to protect assets, people, and property. Better visibility is provided by solar LED lighting, along with protection against brownouts and blackouts. The lights may be adjusted to practically any application and are always present when you need them.

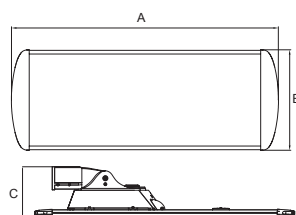
The Dynamo Pro™ Series "All in One" solar streetlight, the most effective LED solar lighting system in the world with a breathtaking 200 lxw, was specifically created to illuminate a wide range of applications. Modern solar power and LED technologies are incorporated into its intelligent design and slim construction to deliver consistent performance and operational dependability for many years. With an outstanding e IK09 rate, Dynamo Pro™ Series tough construction is ready to the task. With marine grade aluminum and stainless steel fasteners and certification to pass the 1000-hour Saline Chamber Test (Salt Spray), its internal components provide IP66 weather protection.

Dynamo Pro™ Series components are the most advanced available in the market. High efficiency Lumileds 5050 led chips combined with a solar panel made of integrated monocrystalline silicon with a 25-year lifespan and a > 21% conversion rate. A non-heavy lithium iron phosphate battery with Dual Protection Technology (charge and discharge/high temperature performance/large current discharge) and a lifespan of more than 2500 cycles is the LiFePO4 battery system. Using the latest technology in MPPT Solar Charger, an intelligent system to control the dimming by MS and timer. With a built-in Microwave Motion Sensor (MW) in the Dynamo Pro™ Solar fixture automatically adjusts the LED light output from maximum brightness to a lower level in response to the detection of movement nearby. Tool free maintenance, the battery box can be opened and easy to replace. Special pug connector wiring, tool free and waterproof with anti-wrong connection function. Horizontal or vertical pole installation, mounted angle is adjustable.

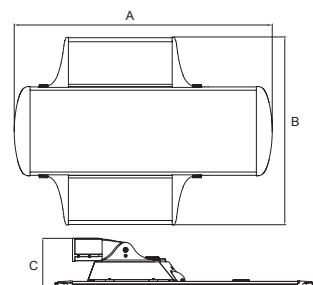
The Dynamo Pro™ Series is built to survive the toughest and most extreme weather conditions, including scorching heat, driving rain, hail, and below-freezing cold.

Dimensions (mm)

30w-100w



120w-200w (Bifold adjustable panels: ± 45°mm)



Model	A	B	C	D Ø
30w	744.8	407.3	206.8	60
40w	803.8	407.3	206.8	60
50w	896.8	407.3	206.8	60
60w	1081.7	407.3	206.8	60
80w	1361.1	407.3	206.8	60
100w	1640.4	407.3	298.3	60
120w	1361.1	855.3	298.8	60
150w	1547.1	855.3	298.8	60
200w	1733.8	855.3	298.8	60

Suitable for pole diameter 60-80 mm

Ordering information

Item	Watts	Solar Panel	Lumens	CCT	Options
AL770020	30w	40w	6000	Blank 5700K	NS No Sensor
AL770021	40w	50w	8000	6 6500K	
AL770022	50w	60w	10000	4 4000K	
AL770023	60w	80w	12000	3 3000K	
AL770024	80w	100w	16000		
AL770025	100w	120w	20000		
AL770026	120w	150w	24000		
AL770027	150w	180w	30000		
AL770028	200w	240w	40000		
AL7700-RC	Remote control				

Modes	
Blank	100% / 30% Varies by hours (Mode 1)
2	100% / 30% 12 hours (Mode 2)
3	70% Constant ON (Mode 3)

12 Hour Cycle Lumen Output

Turns on when sunlight is ≤ 10 lux



Day light (off)



Motion



Stand-by
after 10 seconds no motion

Mode 1

Hours of operation	Motion	Stand-by
• First 2 hours	100%	30%
• Next 3 hours	50%	20%
• Next 6 hours	20%	10%
• Last hour	30%	10%

NOTE: First 2 hours: Stand-by operates at 30% brightness. When motion is detected, light increases to 100% until no motion is detected for 10 seconds, then returns to 30% brightness.

(For more hours of operation, see chart above)
*Cloudy days = <4

Mode 2

Hours of operation	Motion	Stand-by
• First 12 hours	100%	30%

NOTE: Stand-by operates at 30% brightness. When motion is detected, light increases to 100% until no motion is detected for *10 seconds, then returns to 30% brightness.

*Cloudy days = <2

Mode 3

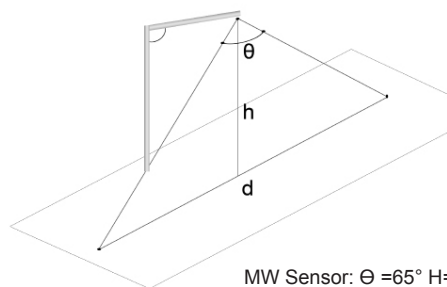
Hours of operation	Motion	Stand-by
• 10 -12 Hours	70%	70%

NOTE: 70% Brightness ON
Cloudy days = <1

Specifications

Fixture	30w	40w	50w	60w	80w	100w	120w	150w	200w
Solar panel	40w/18V	50w/18V	60w/18V	80w/18V	100w/18v	120w/36V	150w/36V	180w/36V	240w/36V
LiFePO ₄ Battery	12.8V18AH	12.8V24AH	12.8V30AH	12.8V36AH	12.8V42AH	25.6V24AH	25.6V30AH	25.6V36AH	25.6V48AH
System	12V	12V	12V	12V	12V	24V	24V	24V	24V
Charging time	6 Hrs	6 Hrs	6 Hrs	6 Hrs	6 Hrs	6 Hrs	6 Hrs	6 Hrs	6 Hrs
Cloudy days*	4	4	4	4	4	4	4	4	4
Working hours	12 Hrs	12 Hrs	12 Hrs	12 Hrs	12 Hrs	12 Hrs	12 Hrs	12 Hrs	12 Hrs

Sensor Range



MW Sensor: $\theta = 65^\circ$ H= up to 9m D=10m

Tests

- Salt Spray-has no rust after testing 1000 hours, standard testing requirement is no less than 1000 hours, PASS
- Vibration Test according IEC60068-2-6:2007
- EMC Directive 2014/30/EU
- EN IEC 55015:2019+A11:2020
- EN 61547:2009
- EN IEC 61000-3-2:2019/A1:2021
- EN 61000-3-3:2013+A2:2021

Components Lifetime

Solar Panel	25 years
Battery	5 years
Battery Life cycles	2500
LED Chip	100,000 hours

Notes

- 3000K= 180 lxw
- Horizontal or vertical pole mounted angle is adjustable to 90°
- 120w-200w bi-fold panel can be adjusted $\pm 45^\circ$
- Lumen Tolerance <7%
- Battery Life cycles 2500 = 2800 days

EPA:

30w = 1.91 ft ²	100w = 6.08 ft ²
40w = 2.08 ft ²	120w = 10.59 ft ²
50w = 2.30 ft ²	150w = 12.01 ft ²
60w = 2.78 ft ²	200w = 13.48 ft ²
80w = 3.50 ft ²	

Packing information

Model	CBM (Master)	Pieces/master	Box Dimensions (cm)	Gross weight (Kg)
30w	0.086	1	80 x 45 x 24	13
40w	0.093	1	86 x 45 x 24	14
50w	0.103	1	95 x 45 x 24	16
60w	0.123	1	114 x 45 x 24	18
80w	0.153	1	142 x 45 x 24	20
100w	0.252	1	170 x 45 x 33	24
120w	0.209	1	141 x 45 x 33	28
150w	0.238	1	160 x 45 x 33	32.5
200w	0.266	1	179 x 45 x 33	36

Equinox RS™ Series

40w/60w/80w/100w



Type II

IP65

IK08

Lumens

170 L/W

CCT

5700K

CRI

70

LifePO4
Battery



-20°C~50°C



50,000

5
YEAR
Warranty

The sun comes up every day; that's the definition of renewable energy. Protecting property, people and assets is one of the key jobs of exterior lighting. Solar LED lighting not only offers better visibility, but also security from brownouts and blackouts. The lights are always there when you need them and can adapt to almost any application.

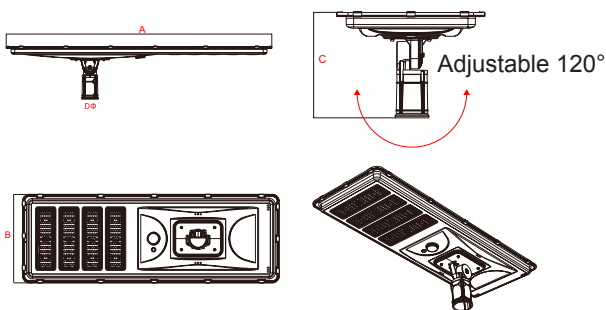
Equinox RS™ Series "All in One" solar street light was specially designed to illuminate a wide range of applications, is the world's most efficient LED Solar lighting system, with a stunning up to 170 lxw. Its clever design and slim line construction incorporate the latest solar power and LED technology, Lumileds 2835 LED Chips, providing many years of consistent performance and operational reliability. We offer Type II for Roadways and Street applications.

Equinox RS™ Series rugged construction is up for the challenge, IK08 rating. Its internal components offer IP65 weather protection with marine grade die cast aluminum, galvanized sheet and stainless-steel fixings. Equinox RS™ Series components are the most advanced available in the market. An integrated monocrystalline silicon solar panel, with a conversion rate up to 21.6%, and 25-years lifespan. LiFePO4 battery system: a non-heavy lithium iron phosphate battery, combined with Dual Protection Technology (charge and discharge/high temperature performance / large current discharge) with a lifespan 2200 cycles. Microwave Sensor allows detection up to 10m mounting high and a perimeter of 6-8 meters with a 120° angle in all direction.

Equinox RS™ Solar fixture has a built-in passive microwave motion sensor that automatically regulates the LED light output from full brightness to a lower level depending upon the detection of movement around the light.

Equinox RS™ Series has been designed to withstand the harshest and most extreme environments has to offer, from blistering heat to driving rain, hail and sub-zero temperatures.

Dimensions (mm)



Model		A	B	C	D Ø
40w	2 LED Bars	700	350	150	60
60w	3 LED Bars	887	400	280	60
80w	4 LED Bars	1160	400	280	76
100w	5 LED Bars	1435	400	280	76

Suitable for pole diameter 60-76mm

Ordering information

Item	Watts	Solar Panel	Lumens	CCT	Mode Options
AL770014	40w	40w	6800	Blank 5700K	Blank Low Traffic
AL770015	60w	60w	10200	6 6500K	H High Traffic
AL770017	80w	80w	13600	5 5000K	
AL770018	100w	100w	17000	4 4000K	
				3 3000K	
				2 2700K	

Remote Control
AL7700RS-RC

12 Hour Cycle Lumen Output

Turns on when sunlight is ≤ 6 lux



Day light (off)



Motion



Stand-by
after 20 seconds no motion

Low Traffic Mode

Hours of operation	Motion	Stand-by
• First Hour	100%	30%
• Next 2 hours	80%	20%
• Next 2 hours	60%	15%
• Last 7 hours	40%	10%

NOTE: Standby operates at brightness indicated above. When motion is detected, light increases to X% until no motion is detected for 20 seconds, then returns to X% brightness.

High Traffic Mode

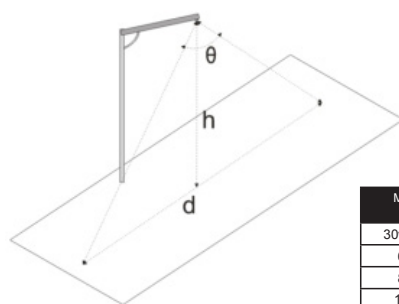
Hours of operation	Motion	Stand-by
• First 2 hours	60%	30%
• Next 2 hours	60%	20%
• Next 2 hours	50%	15%
• Last 6 hours	40%	10%

NOTE: Standby operates at brightness indicated above. When motion is detected, light increases to X% until no motion is detected for 20 seconds, then returns to X% brightness.

Specifications

Fixture	40w	60w	80w	100w
Mono-crystalline Solar Panel	40w	60w	80w	100w
	16v	18v	18v	36v
LiFePO ₄ Battery	30AH	42AH	54AH	72AH
	12.8v	12.8v	12.8v	12.8v
Charging time	5 Hrs	5 Hrs	5 Hrs	5 Hrs
Cloudy days	3-5	3-5	3-5	3-5
Working hours	12 Hrs	12 Hrs	12 Hrs	12 Hrs

Sensor Range-Microwave



Microwave
 Θ : 120°
 h: 10m max
 d: 8-10m

Model	Install Height	Detector Height
30w/40w	4-6M	8-10M
60w	6-8M	8-10M
80w	10M	8-10M
100w	10M	8-10M

Components Lifetime

Mono-crystalline Solar Panel: 25 years
 LifePO₄ Battery : 3-5 years
 Battery Life cycles 2200
 LED Chips: 50,000 hours

Notes

- Wind resistance: 6-8 Level
- IK not applicable for Solar Panel
- Battery Life cycles 2200 = 2400 days
- LED Chips = Lumiled 2835

- 40w = PWM Controller
- 60w-100w = MPPT Controller
- AL7700RS-RC can reach up to 8m height

- Battery:
 If the battery is not used more than 5-6 months, it will drain.
 It must be charged or recharged every 4 months to avoid damage and loss or warranty.

Packing Information

Model	CBM (Master)	Pieces/master	Box Dimensions (cm)	Gross weight (Kg)
40w	0.0442	1	84 x 40.5 x 13	9
60w	0.0605	1	103.5 x 45 x 13	13.5
80w	0.0766	1	131 x 45 x 13	18
100w	0.0927	1	158.5 x 45 x 13	22



Solaris™ Series

30w/60w/90w/120w

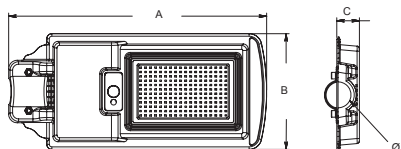


The sun comes up every day; that's the definition of renewable energy. Solar street lighting can be used on roadways, rural roads and neighborhood streets to provide additional security to travelers. Dark streets can be a hazard to pedestrians and vehicle travelers alike. Protecting property, people and assets is one of the key jobs of exterior lighting. Security through lighting has been instrumental to deter crime and improve security to the public, business and residential spaces. Solar LED lighting not only offers better visibility, but also security from brownouts and blackouts. The lights are always there when you need them and can adapt to almost any application without additional trenching or added utility costs.

Solaris™ Series "All in One" solar street light was designed to illuminate a wide range of applications for limited budget projects. Turns on when sunlight is ≤ 50 lux, operates @ 100% lumen output, after 18 sec of no motion it turns to 10% lumen output. Its working cycle of 10-12 hours allows to serve efficiently, and recharges in 6-8 hours. *It can operate up to 2 days without full charge. Recommended mounting 3-4m. Solaris™ Series will provide an Irradiation area up to 15m².

LED solar lights require very little maintenance and are easier to install than their wired counterparts. Underground wiring, on-site transformers and electrical enclosures are typically more costly than installing new solar lights. LED technology means that the lamps require fewer replacements, can be controlled and provide significant energy savings over traditional lamps. Solar means there is no electric bill...ever.

Dimensions (mm)



Model	A	B	C	Ø
30w	371	171	44.5	38
60w	412	203	44.5	48
90w	508	228	44.5	48
120w	641	248	45.0	48

Suitable for pole 38mm / 48mm

Bracket:

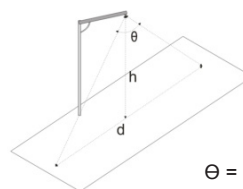
30w- = Ø38 x 360mm
60w-120w = Ø48 x 360mm



Specifications

Nominal Power	30w	60w	90w	120w
Working Power	10w	20w	40w	50w
Fixture (lumens)	1000	2000	4000	5000
Solar Panel	6w 5v	7.5w 4.5v	14w 4.5v	17.5w 4.5v
Battery	4AH	8AH	12AH	16AH
Voltage	3.2v	3.2v	3.2v	3.2v
Charging time	6-8 Hrs	6-8 Hrs	6-8 Hrs	6-8 Hrs
Cloudy days	1-2	1-2	1-2	1-2
Working hours	10-12 Hrs	10-12 Hrs	10-12 Hrs	10-12 Hrs

Sensor Range



$\Theta = 100^\circ$ H = 3-4m D = 3-4m

Ordering information

Item	Watts	Lumens	CCT	Options
AL770030	30w	1000	Blank 6500K	B Bracket Included
AL770031	60w	2000	5 5000K	
AL770032	90w	4000	4 4000K	
AL770033	120w	5000	3 3000K	
Bracket				
AL770034	30w			
AL770035	60w-120w			

Components Lifetime

Solar Panel	3 years
Battery	2000 cycles / 3 Years
LED Chip	60,000 hours
Ensure battery is fully charged every six months to prevent degradation.	

Notes

- Lumens:
 - 6500K = 100 lxw
 - 5000K = 97 lxw
 - 4000K = 94 lxw
 - 3000K = 90 lxw
- * Based on working power
- 6500K = 6500-7000K
- Lumens tolerance 10%
- Solar Panel = IK03
- Battery: Lithium phosphate / LifePO4
- Microwave Motion Sensor: 5.8G
- Housing: ABS
- Lens: PC
- Remote control included (batteries not included)

- Remote Functions with Sensor:
 - At Sunset 10% / motion = 100% (Auto & L Mode, 18 sec)
 - At Sunset 30% / motion = 100% (H Mode, 18 sec)
 - At Sunset 20% / motion = 100% (M Mode 18 sec)
- Remote Functions with sensor disabled:
 - Dim: On at 40% for first half hour, 20% next 2.5 hours, 10% output until battery low
 - Full: On at 100% until battery is low
 - Partial: On at 20% until battery is low

Packing information

With Bracket

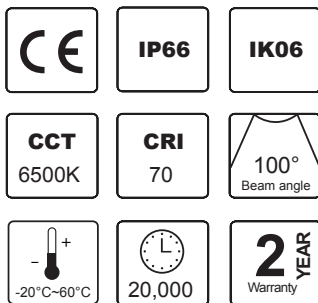
Model	CBM (Master)	Pieces/master	Box Dimensions (cm)	Gross weight (Kg)
30w	0.0732	6	53 x 42.5 x 32.5	13.8
60w	0.0700	5	45 x 44.5 x 35	13.5
90w	0.0897	5	54.5 x 44.5 x 37	16
120w	0.0954	4	68 x 36 x 39	16

Without Bracket

Model	CBM (Master)	Pieces/master	Box Dimensions (cm)	Gross weight (Kg)
30w	0.0406	6	44 x 42 x 22	13.8
60w	0.0416	5	45 x 37 x 25	7.7
90w	0.0544	5	54.5 x 37 x 27	10.4
120w	0.0601	4	68 x 30 x 29.5	11.3

Sentinel™ Series

30w/60w/90w/120w

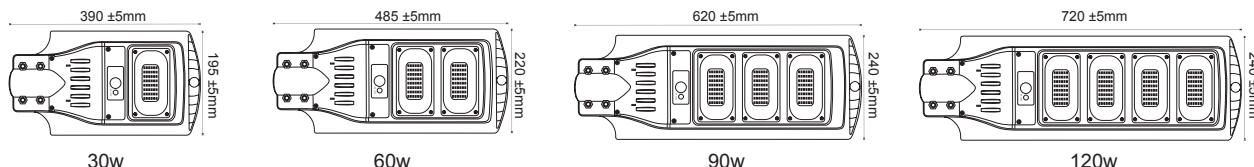


The sun comes up every day; that's the definition of renewable energy. Solar street lighting can be used on highways, roadways, rural roads and neighborhood streets to provide additional security to travelers. Dark streets can be a hazard to pedestrians and vehicle travelers alike. Protecting property, people and assets is one of the key jobs of exterior lighting. Security through lighting has been instrumental to deter crime and improve security to the public, business and residential spaces. Solar LED lighting not only offers better visibility, but also security from brownouts and blackouts. The lights are always there when you need them and can adapt to almost any application without additional trenching or added utility costs.

Sentinel™ Series "All in One" solar street light was designed to illuminate a wide range of applications for limited budget projects. Turns on when sunlight is ≤ 50 lux, operates @ 100% lumen output, after 15 sec of no motion it turns to 30% lumen output. Its working cycle of 10-12 hours allows to serve efficiently, and recharges in 5-6 hours. *It can operate up to 2 days without full charge. Recommended mounting 4-6m. Sentinel™ Series will provide an Irradiation area up to 200m².

LED solar lights require very little maintenance and are easier to install than their wired counterparts. Underground wiring, on-site transformers and electrical enclosures are typically more costly than installing new solar lights. LED technology means that the lamps require fewer replacements, can be controlled and provide significant energy savings over traditional lamps. Solar means there is no electric bill...ever.

Dimensions (mm)



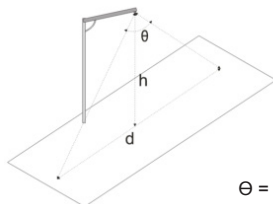
Suitable for pole diameter: Ø 45-52mm (max)

Specifications

Nominal Power	30w	60w	90w	120w
Working Power	4w	8w	12w	13.5
Solar Panel (DC6V)	8w	12w	15w	18w
Battery	5AH	10AH	15AH	18 AH
Charging time	5-6Hrs	5-6 Hrs	5-6Hrs	5-6 Hrs
Cloudy days	2	2	2	2
Working hrs (@ full power up to)	10-12	10-12	10-12	10-12
Stand by	12 Hrs	12 Hrs	12 Hrs	12 Hrs
Irradiation area	80m ²	120m ²	160m ²	200m ²

- Turns on when sunlight is ≤ 50 lux
- Motion: 100% lumen output
- Stand-by (after 15 sec no motion) 30% lumen output
- Battery: 32650 Lithium phosphate DC3.2V
- Battery Life cycles 1000 = 1000 days
- Remote Control included

Sensor range



$$\Theta = 100^\circ \quad H = 6-8m \quad D = 6m$$

Components Lifetime

Solar Panel	Up to 3 years
Battery	1000 cycles*
LED Chip	20,000 hours

If the battery is not used more than 5-6 months, it will die. So it must be charged or recharged before 5-6 months.

Ordering information

Item	Watts	Lumens
AL574407	30w	500
AL574408	60w	900
AL574409	90w	1400
AL574420	120w	1600

Note

*Fixture will work 2 days at 30% brightness without charging under cloudy days. (without sensing)

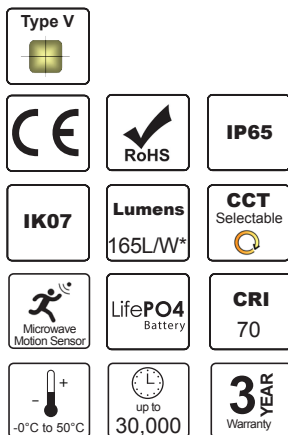
Packing information

Model	CBM (Master)	Pieces/master	Box Dimensions (cm)	Gross weight (Kg)
30w	0.0559	10	41 x 32.5 x 42	14
60w	0.0390	5	50 x 32.5 x 24	10.5
90w	0.0540	5	64 x 32.5 x 26	12.5
120w	0.0625	5	74 x 32.5 x 26	15



Solara™ Series

CCT Selectable
23w/40w/50w



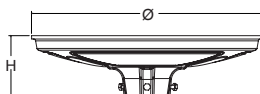
The sun rises daily providing a consistent and renewable energy source. Solar street lighting systems are applicable for recreational parks, rural and residential streets, and secondary roads, offering enhanced visibility and safety while improving the aesthetic of public spaces. Unlit pathways and roads pose potential hazards for pedestrians and vehicles.

Exterior lighting plays a critical role in public safety by reducing risk and acting as a deterrent to criminal activity. Solar-powered LED lighting ensures illumination independent of grid failures, offering resilience against blackouts and brownouts. These systems are designed for autonomous operation in diverse environments, eliminating the need for trenching and additional utility infrastructure.

The Solara™ Series "All in One" Solar Post Top is engineered for budget-sensitive installations across a variety of low-traffic or decorative lighting applications. The unit activates automatically when ambient light levels fall below ≤ 50 lux, delivering 100% light output. After 18 seconds of no motion detection, the output reduces to 10% to conserve energy. A full operating cycle ranges from 10 to 12 hours, with a typical recharge time of 6–8 hours. The system includes energy storage sufficient to function up to 2 days without full solar input. Recommended installation height: 3–4 meters. Effective coverage area: up to 15m².

The Solara™ Series requires minimal routine maintenance and offers straightforward installation compared to conventional grid-powered systems. Unlike traditional lighting, which often involves underground cabling, on-site transformers, and electrical enclosures, the Solara Series simplifies deployment with no trenching or external wiring required. Built on efficient LED technology, it reduces replacement frequency, supports intelligent control features, and delivers long-term energy savings.

Dimensions (mm)



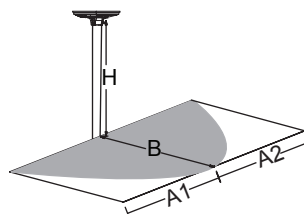
Model	D	H	Arm Ø
23w	420	123	60
40w	520	137	60
50w	520	137	60

Suitable for pole 58-60mm

Specifications

Nominal Power	230w	400w	500w
Working Power	14w	24w	30w
Fixture (lumens)	2300	4000	5000
Solar Panel	15w	24w	24w
Battery	3.2V 12AH	3.2V 20AH	3.2V 20AH
Voltage	3.2v	3.2v	3.2v
Charging time	6-8 Hrs	6-8 Hrs	6-8 Hrs
Cloudy days	1-2	1-2	1-2
Working hours	10-12 Hrs	10-12 Hrs	10-12 Hrs

Sensor Range



H(m)	A1(m)	A2(m)	B(m)
3	5	5	4
4	4	4	3.5

Ordering information

Item	Watts	Lumens	CCT Selectable
AL577130	23w	2300	3K/4K/65K
AL577131	40w	4000	3K/4K/65K
AL577132	50w	5000	3K/4K/65K

Components Lifetime

Solar Panel	3 years
Battery	2000 cycles / 3 Years
LED Chip	60,000 hours

Ensure battery is fully charged every six months to prevent degradation.

Notes

- Lumens: 165 lxw* Based on working power
- Lumens tolerance 10%
- LED Chips: SMD 2835
- LED Chips Qty: 23w = 156 pcs, 40w/50w = 248 pcs
- Battery needs to be 100% charged for correct operation
- Manufactured to comply with CE & RoHS

- Battery: Lithium phosphate / LifePO4
- Microwave Motion Sensor: 5.8G
- Housing Color: Pantone Cool Gray 11U
- Housing: ABS
- Lens: PC
- Remote Control included (batteries not included)



Remote Functions with Sensor:

- At Sunset 10% / motion** = 100% (Auto & L Mode, 18 sec, approx 10-12 hours of operation when fully charged and low traffic mode)
- At Sunset 20% / motion** = 100% (M Mode, 18 sec, approx 6 hours of operation when fully charged and low traffic mode)
- At Sunset 30% / motion** = 100% (H Mode 18 sec, approx 4 hours of operation when fully charged and low traffic mode)

Remote Functions with sensor disabled:

- Dim:** On at 40% for first half hour, 20% next 2.5 hours, 10% output until battery is low up to 12 hours lighting time with fully charged battery
- Full:** On at 100% until battery is low up to 1.5 hours lighting time with fully charged battery
- Partial:** On at 20% until battery is low up to 10 hours lighting time with fully charged battery

Packing information

Model	CBM (Master)	Pieces/master	Box Dimensions (cm)	Gross weight (kg)
23w	0.0363	2	46.5 x 16.8 x 46.5	3.6
40w	0.0517	2	56.5 x 16.2 x 56.5	5.5
50w	0.0517	2	56.5 x 16.2 x 56.5	5.5



Warranty

Americanlite® is pleased to provide a 7, 5, 3 or 2 year limited warranty covering the LED fixtures on this catalogue. Americanlite® warrants that the LED fixtures comply with Americanlite®'s published specifications and are free from defects in materials and workmanship.

All our equipment is CE, ETL or UL approved and manufactured with approved components. Americanlite® reserves the right to change or improve the design or components of any of its products due to parts availability or changes in standards, without assuming any obligation to modify any product previously manufactured and without notice. All equipment is tested and inspected before shipment.

This warranty is void if the product is operated outside of its normal operating conditions. The foregoing warranty does not apply to failures caused by acts of God or as a result of any abuse, misuse, abnormal use, or use in violation of any applicable standard, code or instructions for use in installations, including, but not limited to, those contained in the Standards for the International Electrotechnical Commission. Americanlite® reserves and has the right to examine failed fixtures to determine the cause of failure, excessive lumen depreciation and patterns of usage.