



FIRSTLIGHT TECHNOLOGIES

Team Solarcology®
808.833.6020
www.solarbollards.com
Big solutions, small footprints™

SOLAR LIGHTING EVOLVED

Self-Contained Solar LED Bollards from First Light Technologies:
The simplest, most cost-effective form of outdoor lighting.



PLB ARCHITECTURAL SOLAR ILLUMINATED BOLLARD

- Contemporary styling
- Cutoff lighting for pathways and outdoor spaces
- Provides effective ground-level illumination



WLB ARCHITECTURAL SOLAR ILLUMINATED WAYFINDING BOLLARD

- Familiar louvred design
- Wayfinding / delineation applications
- Highly-visible fixture adds style to any location



PLB-AC HIGH-EFFICIENCY ILLUMINATED BOLLARD

- Wired version of our solar PLB
- Full cutoff lighting for AC powered applications
- Ideal for new and retrofit AC applications

FEATURES



WIRE FREE LIGHTING

No electrical design or trenching is required.



SAVE TIME AND MONEY

Our solar lights cost 50% less than wired lighting and only take 15 minutes to install.



LIGHTING ALL NIGHT EVERY NIGHT

You can count on our lights to deliver effective light for years without maintenance.

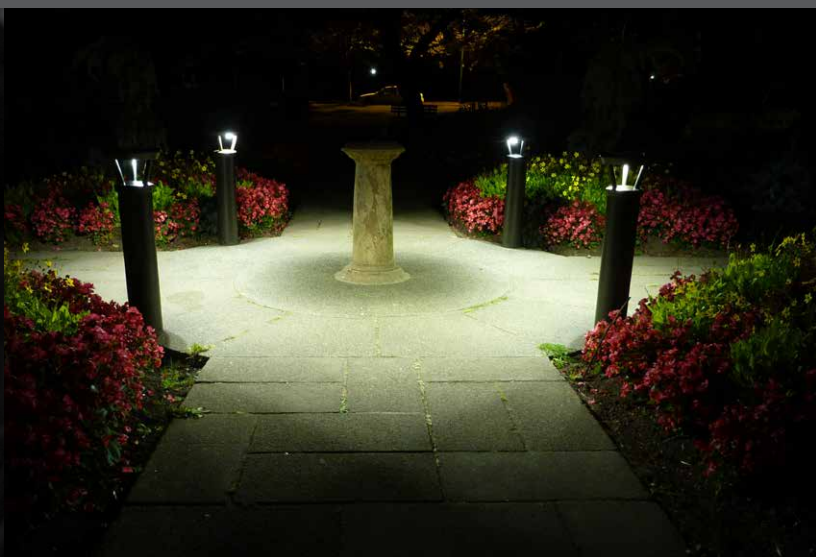


GREAT DAY TIME APPEARANCE

Our solar lights look like lights and our designs complement your project aesthetic with a low chance of vandalism or theft.

FIRST LIGHT TECHNOLOGIES

Our mission is to build safer, more usable communities through solar lighting in public outdoor spaces. Currently, thousands of municipalities, developers, tribes, and military facilities are benefiting from their choice to install First Light Solar Lights. For the past 8 years, we have set the standard for quality, reliability, and all-night every-night lighting performance. Our team of solar lighting experts has a combined 100 years of industry expertise, which shows with our focus and attention to detail. Our business is growing and thriving, and our lights are built to stand the test of time.



ATTENTION TO DETAIL



INTELLIGENT CONTROLS

Our advanced predictive self-learning controller optimizes lighting performance and reliability in all conditions.



SELF-CONTAINED FIXTURES

Solar lights that look just like normal lights but with no wires in, no wires out. There is no separate solar panel, no battery box, and no light fixture. Every element is purpose-built into one simple form.



ARCHITECTURAL QUALITY

Designed and built to last, with the highest grade materials, finishes and construction.



SIMPLICITY

Outdoor lighting doesn't get easier than this: Simple to specify, simple to buy, simple to install and live with.



PERFORMANCE + RELIABILITY

We specialize in efficiently managing energy to deliver light where and when you need it, year in year out. Off-grid lighting provides unmatched resilience.



SUSTAINABILITY

No power bills, no carbon emissions. Our products are built with locally-sourced materials, are made from recycled content, contain no toxic substances and are readily recyclable at end of life.

SIMPLE, SUSTAINABLE SOLAR LIGHTING

Eckerd College is located on Florida's Gulf Coast and is focused on an active outdoor campus lifestyle, with strong values that encourage staff and students to be outside. As part of their landscaping master plan, they focused on improving security and usability along a number of pathways around the campus. They chose First Light PLB Solar Illuminated Bollards to provide low full cut-off area lighting that minimized light pollution while effectively lighting up the pathways. Wire-free solar lights eliminated the need for trenching, lowered install costs and preserved their existing landscaping. Currently they have over 100 PLBs providing light all night, every night.

“ We have been very impressed with the light output and the great architectural styling of the PLB Illuminated bollard.

- Shawn Wilson
Project Manager - Eckerd College



Representative:

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PLB Series

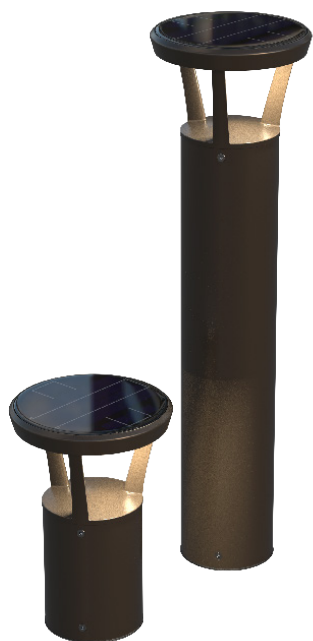
SOLAR POWERED LED BOLLARD

Project: _____

Type: _____

Quantity: _____

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The PLB series solar powered LED bollard is ideal for architectural and commercial pathway applications. The self-contained, stylish, contemporary design combined with high quality construction and unequalled solar powered performance make the PLB series an excellent fit where quality lighting is required.

Utilizing solar power and LED lighting the PLB bollards are fully self contained and offer significant benefits over typical wired bollards:

- Low installed costs and minimal site impacts with no trenching, cabling or wiring
- Minimal ongoing costs with no electricity bills or bulbs to change
- Immune from power outages
- A sustainable choice without recurring carbon emissions

All of our solar powered lights are enabled by our innovative Solar Lighting Controller (SLC). The SLC in each light is “self-learning” and allows the lights to predictively adapt to their surroundings, providing a level of lighting performance and reliability unavailable in other solar lighting products.

TECHNICAL SPECIFICATIONS

Solar Module:

- High impact, UV resistant encapsulation
- High-efficiency mono-crystalline cells
- Integrated into bollard housing
- Used for day/night detection (no photocell required)

Solar Lighting Controller (SLC):

- High efficiency Maximum Power Point Tracking (MPPT) charge controller
- Micro-controller based technology
- Includes high-efficiency LED driver
- Integrated into bollard housing
- Designed to automatically manage lighting performance based on environmental conditions and lighting requirements
- Patent pending

Battery:

- High performance Lithium (LiFePO₄)
- Exceptional 8 – 10 year life cycle
- High temperature tolerance
- Contained within bollard post
- Designed for easy battery changes when required

LEDs and Optics:

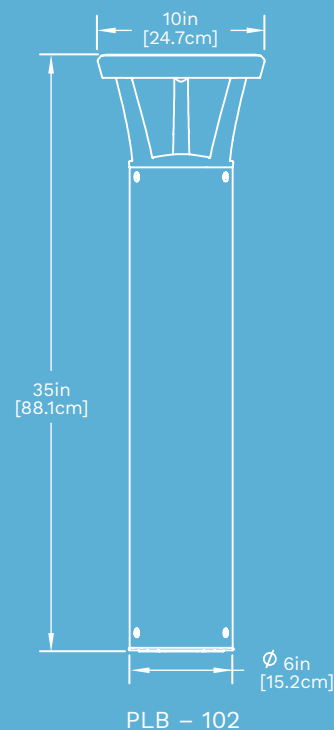
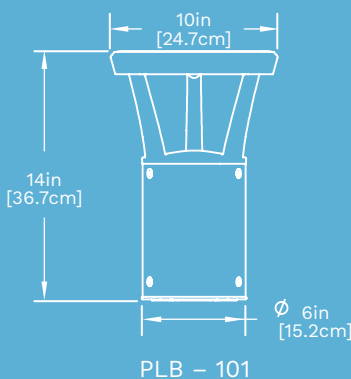
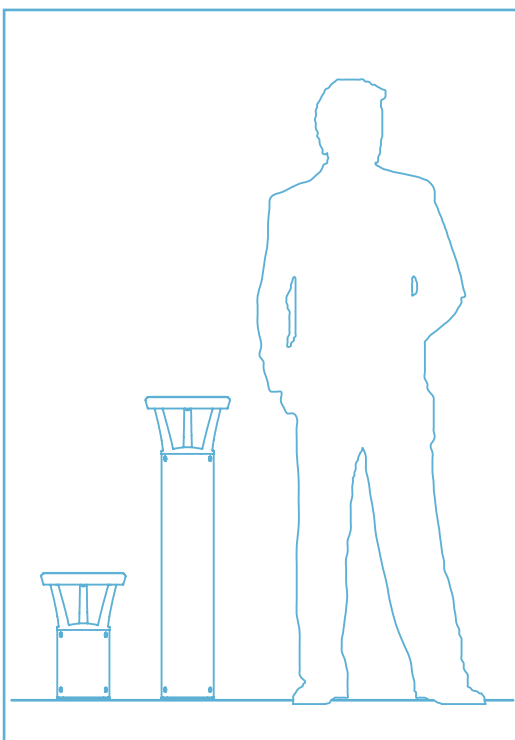
- High output Cree LEDs
- 100,000 hour L70 lifetime
- Warm (3000K) and neutral (4500K) white color temperatures available
- Type III and Type V high efficiency, cut-off optics
- Typical lumen output of 200 - 300 lumens

Mechanical Construction:

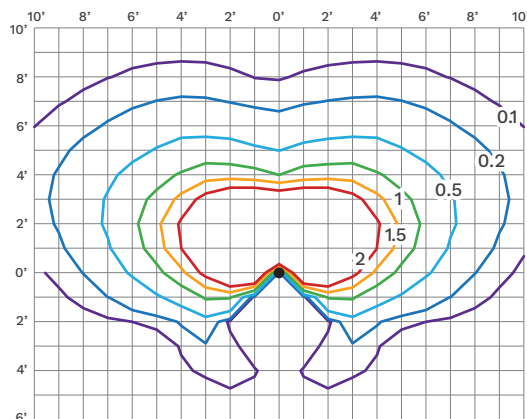
- Cast, low copper aluminum housing
- Extruded, low copper aluminum post
- Stainless fasteners with security fastener option
- High strength mounting base
- Architectural grade, super durable, TGIC powder coat
- Four standard colors with custom colors available

Factory Set Lighting Profiles:

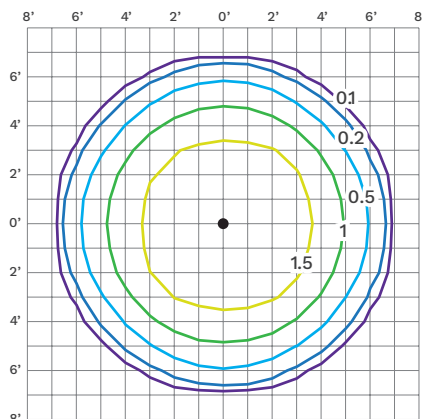
- On at dusk, off at dawn
- On at dusk, turn off after 6 hours
- On at dusk, dim to 30% after 6 hours till dawn
- On at dusk, off after 5 hours, on 1 hour before dawn
- On at dusk, dim to 30% after 5 hours, on 1 hour before dawn



PHOTOMETRICS (IES files available on request)



PLB102 - Type 3



PLB102 - Type 5

Represented by:



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GSA Contract Holder
GS-07F-182GA

ORDER MATRIX

Series	Height	Finish	Distribution	LED Color	Lighting Profile	Options
PLB	101 - 14"	BK - Black	ASM - Type 3	WW - 3000K	00 - Dusk till dawn	WOB - Ship Without Battery
	102 - 36"	BZ - Bronze	SYM - Type 5	NW - 4500K	01 - Dark +6 hours then off	SEC - Security Fasteners
		SV - Silver			02 - Dark +6 hours then 30%	PA - Pre-Ship Anchor Bolts
		WH - White			03 - Dark +5 hours, off, Dawn -1 hour	
		CC - Custom			04 - Dark +5 hours, 30%, Dawn -1 hour (DEFAULT)	

Notes:

- Specifications subject to change without notice
- All light levels in foot candles (fc) with 4500K color temperature and 160 lumen output
- To convert to lux multiply light level by 10.7



Project: _____

Type: _____

Quantity: _____

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The PLB-AC Series high efficiency LED bollard is ideal for pathway, egress and public space lighting applications. The stylish, contemporary design makes it a perfect fit for any new construction, renovation, or retro-fit project that requires exceptional, full cutoff lighting performance with maximum energy savings.

Utilizing high performance LED technology and optics, the PLB-AC Series offers significant benefits:

- High efficacy and ultra-low power consumption
- Asymmetrical and symmetrical light distributions
- Full cutoff optical performance
- Maintenance free with no bulbs or ballasts to change
- Robust, vandal resistant design
- Available in Amber Turtle option

PLB-AC is part of the PLB series LED bollard family and is a compliment to the solar powered PLB version. The PLB-AC is a great solution for areas where wired power exists or site conditions don't allow for a solar powered bollard (i.e. the shaded side of a building, or under dense tree cover).



TECHNICAL SPECIFICATIONS

LEDs & Optics:

- High output Cree LEDs
- Warm (3000K), neutral (4500K) color temperatures available
- High efficiency Type 3, 4, and 5 optical distributions
- All distributions full cutoff
- CRI > 70
- L70 lumen maintenance > 115,000 hours
- 950 lumens (at 4500K with 700mA driver)
- Available in Amber Turtle option

Mechanical Construction:

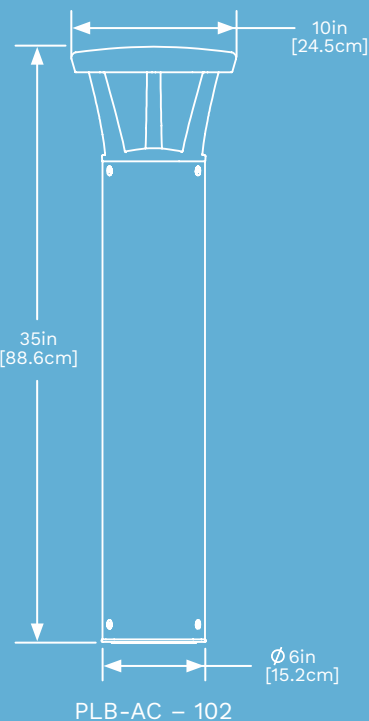
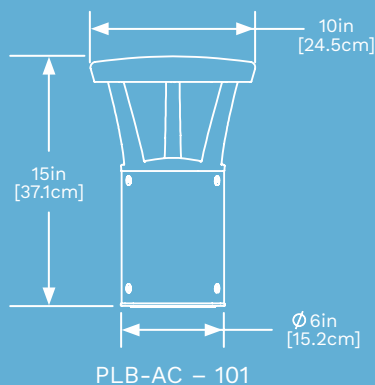
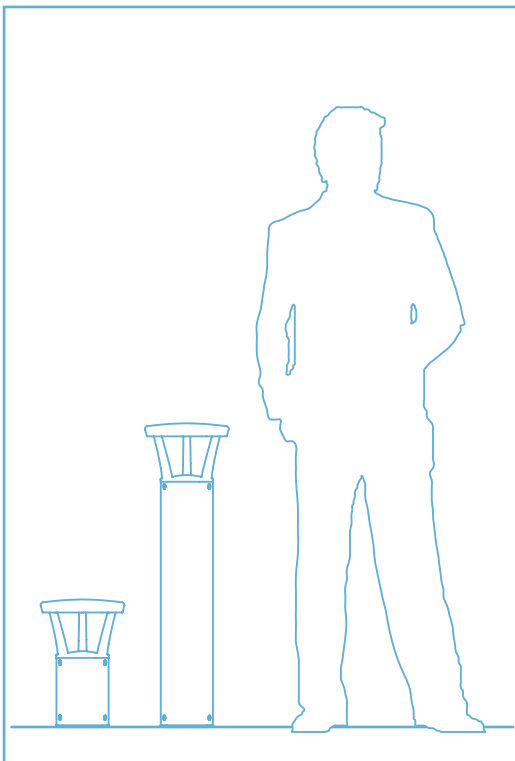
- Cast, low copper aluminum housing
- Extruded, low copper aluminum post
- High strength mounting base
- Stainless fasteners with security fastener option
- Architectural grade, super durable, TGIC powder coat
- Four standard colors with custom colors available

Driver:

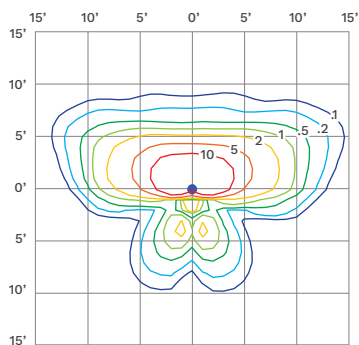
- 10W power consumption
- >0.98 power factor at full load
- 110 ~ 277 VAC, 47 ~ 63Hz input range
- OCP, SCP, OVP protection, auto recovery
- AC Phase - trailing-edge dimming compatible
- >100,000 hour MTBF

Warranty & Certification:

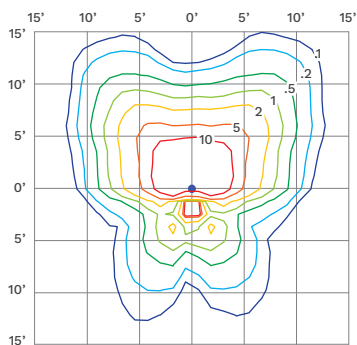
- 5 year limited warranty
- CSA C22.2 No. 250.0-08 - ANSI/ UL Standard 1598
- ANSI/ UL Standard 8750
- CSA C22.2 No. 250.13-14
- LED Lighting Facts Verification Tested
- DLC listed



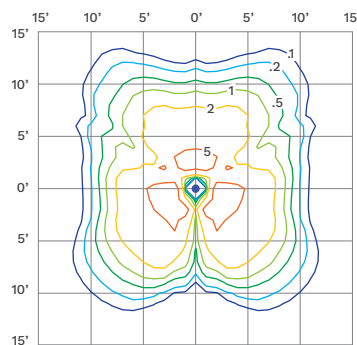
PHOTOMETRICS (IES files available on request)



PLB-AC - Type 3



PLB-AC - Type 4



PLB-AC - Type 5



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ORDER MATRIX

Series	Height	Finish	Distribution	LED Color	Voltage	Options
PLB-AC	101 - 14"	BK - Black	ASM - Type 3	30K - 3000K	UV7 - Universal Voltage (700mA)	SEC - Security Fasteners
	102 - 36"	BZ - Bronze	FT - Type 4	43K - 4500K		AMB - Amber Turtle
		SV - Silver	SYM - Type 5			PA - Pre-Ship Anchor Bolts
		WH - White				
		CC - Custom				

Notes:
- Specifications subject to change without notice
- All light levels in foot candles (fc) with 4500K color temperature and 950 lumen output
- To convert to lux multiply light level by 10.7



Project: _____

Type: _____

Quantity: _____

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The WLB series solar powered LED bollard is well suited for low level architectural, commercial way-finding, and landscape lighting applications. The self-contained, simple, louvered design combined with high quality construction and unequalled solar powered performance make the WLB series an excellent choice.

Utilizing solar power and LED lighting the WLB bollards are fully self contained and offer significant benefits over typical wired bollards:

- Low installed cost and minimal site impact with no trenching, cabling or wiring
- Minimal ongoing costs with no electrical bills or bulbs to change
- Immune from power outages
- A sustainable choice without recurring carbon emissions

All of our solar powered lights are enabled by our innovative Solar Lighting Controller (SLC). The SLC in each light is "self-learning" and allows the light to predictively adapt to their surroundings, providing a level of lighting performance and reliability unavailable in other solar lighting products.



TECHNICAL SPECIFICATIONS

- Solar Module:**
- High impact, UV resistant encapsulation
 - High efficiency mono-crystalline cells
 - Fully integrated into bollard housing
 - Used for day/night detection (no photocell required)

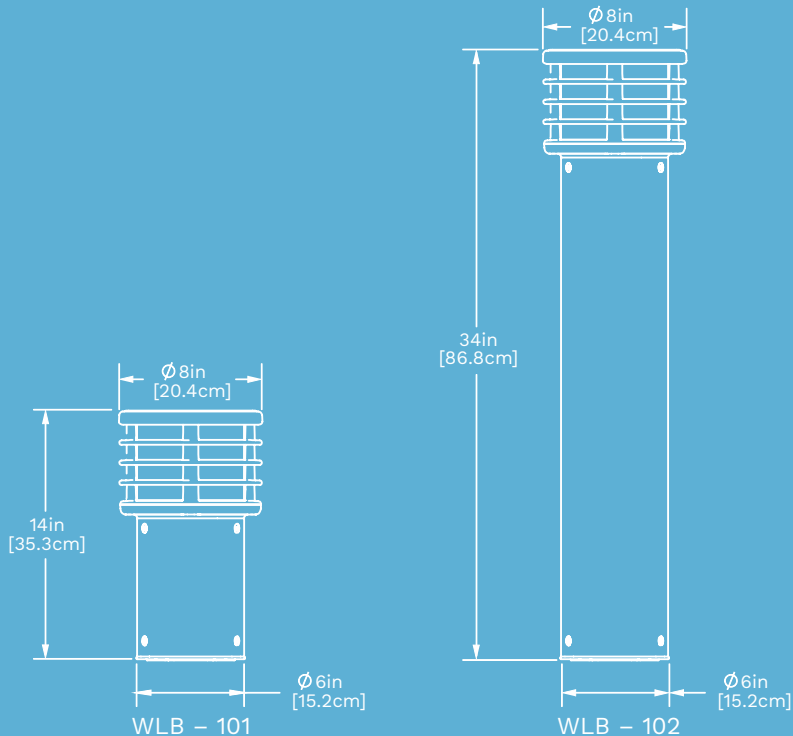
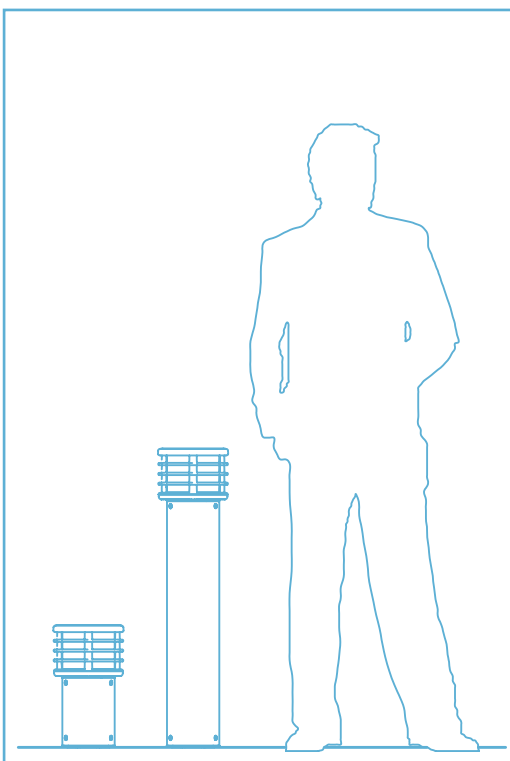
- Solar Lighting Controller (SLC):**
- High efficiency Maximum Power Point Tracking (MPPT) charge controller
 - Microcontroller based system
 - Includes high efficiency LED driver
 - Integrated into bollard housing
 - Automatically manages lighting performance based on environmental conditions and lighting requirements
 - Patent pending

- Battery:**
- High performance Lithium (LiFePO₄)
 - Exceptional 8 – 10 year life cycle
 - High temperature tolerance
 - Contained within bollard post
 - Designed for easy battery changes when required

- LEDs and Optics:**
- High output Cree LEDs
 - 100,000 hour L70 lifetime
 - Warm (3000K) and neutral (4500K) white color temperatures available
 - Omni-directional light output with low glare, frosted lens
 - Typical output of 136 – 210 lumens

- Mechanical Construction:**
- Cast, low copper aluminum housing
 - Extruded, low copper aluminum post
 - Stainless fasteners
 - Architectural grade, super durable, TGIC powder coat

- Factory Set Lighting Profiles:**
- On at dusk, off at dawn
 - On at dusk, turn off after 6 hours
 - On at dusk, dim to 30% after 6 hours
 - On at dusk, off after 5 hours, on 1 hour before dawn
 - On at dusk, dim to 30% after 5 hours, on for 1 hour before dawn



ORDER MATRIX

Series	Height	Finish	Distribution	LED Color	Lighting Profile	Options
WLB	101 - 13.6"	BK - Black	SYM - Symmetrical	WW - 3000K	00 - Dusk till dawn	WOB - Ship Without Battery
	102 - 34"	BZ - Bronze		NW - 4500K	01 - Dark +6 hours then off	SEC - Security Fasteners
		SV - Silver			02 - Dark +6 hours then 30%	PA - Pre-Ship Anchor Bolts
		WH - White			03 - Dark +5 hours, off, Dawn -1 hour	
		CC - Custom			04 - Dark +5 hours, 30%, Dawn -1 hour (DEFAULT)	

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Notes:
- Specifications subject to change without notice





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SOLAR LIGHTING EVOLVED

Self-Contained Solar LED Luminaires from First Light Technologies:
The simplest, most cost-effective form of outdoor lighting.



IPL ARCHITECTURAL SOLAR LED LUMINAIRE

- Asymmetrical rectilinear design smartly complements modern outdoor spaces
- Pedestrian scale applications: parks, pathways and playgrounds



SCL COMMERCIAL SOLAR LED LUMINAIRE

- Discrete 'shoe box' style fixture
- Commercial / industrial applications: security, area lighting



SCL2 HIGH POWERED COMMERCIAL SOLAR LED LUMINAIRE

- Discrete 'shoe box' style fixture
- Larger applications: parking lots, site and area lighting
- Motion sensor | wireless smartphone app

FEATURES



WIRE FREE LIGHTING

No electrical design or trenching is required.



SAVE TIME AND MONEY

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LIGHTING ALL NIGHT EVERY NIGHT

You can count on our lights to deliver effective light for years without maintenance.



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ATTENTION TO DETAIL



INTELLIGENT CONTROLS

Our advanced predictive self-learning controller optimizes lighting performance and reliability in all conditions.



SELF-CONTAINED FIXTURES

Solar lights that look just like normal lights but with no wires in, no wires out. There is no separate solar panel, no battery box, and no light fixture. Every element is purpose-built into one simple form.



ARCHITECTURAL QUALITY

Designed and built to last, with the highest grade materials, finishes and construction.



SIMPLICITY

Outdoor lighting doesn't get easier than this: Simple to specify, simple to buy, simple to install and live with.



PERFORMANCE + RELIABILITY

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SUSTAINABILITY

No power bills, no carbon emissions. Our products are built with locally-sourced materials, are made from recycled content, contain no toxic substances and are readily recyclable at end of life.

SIMPLE, RESILIENT SOLAR LIGHTING

Gene Green Park is a 250-acre park in a leafy suburb of Houston, Texas. Prior to installing solar lights from First Light Technologies, the park was a 'daytime' only park. First Light's IPL Series Self Contained Solar Luminaires were chosen for this project due to their rugged construction, reliable performance and low cost to install. Spark Electric installed 154 lights over a two week period without any trenching or site reclamation, and Harris County is thrilled about the performance and the cost.

First Light Solar Luminaires are simple to install, taking only 15 minutes per fixture. They are built to last, and saved Harris County over \$250,000 versus trenching and wiring. When Hurricane Harvey hit and this park was literally underwater, the lights still shone bright. It's a pleasure working with First Light.

- **Andrew DeBarbieris, Spark Lighting**
Electrical Contractor, Houston, TX



Representative:
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SOLAR LED INTEGRATED ARCHITECTURAL AREA LIGHT

Project: _____

Type: _____

Quantity: _____

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The IPL series solar LED luminaire is an ideal choice for architectural, commercial, recreational bikeway/pathway and public space lighting applications. The self-contained, contemporary, curvilinear design smartly embraces modern solar power, adaptive control and LED technologies. With robust construction, and unequalled performance the IPL series is an excellent fit wherever high-quality, full cutoff lighting and minimal visual clutter is required.

Utilizing solar power and LEDs, the IPL is completely self-contained and offers significant benefits over grid-based pathway lights including:

- Low installed cost and minimal site impact with no trenching, cabling or wiring
- Minimal ongoing costs with no electrical bills or bulbs to change
- Not affected by power outages
- A sustainable choice without recurring carbon emissions

All of our solar powered lights are enabled by our innovative Solar Lighting Controller (SLC). The SLC in each light is “self-learning” and allows the lights to predictively adapt to their surroundings, providing a level of lighting performance and reliability unavailable in other solar lighting products.

TECHNICAL SPECIFICATIONS

- Solar Module:**
- High-efficiency mono-crystalline cells
 - Inconspicuously mounted on top of luminaire
 - Used for day/night detection (no photocell required)

- Solar Lighting Controller (SLC):**
- High-efficiency, temperature compensated Maximum Power Point Tracking (MPPT)
 - Micro-controller based technology
 - Includes high-efficiency LED driver
 - Integrated into luminaire housing
 - Designed to automatically manage lighting performance based on environmental conditions and lighting requirements
 - Patent Pending

- Battery:**
- High performance Lithium (LiFePO₄)
 - Exceptional 8 – 10 year life cycle
 - High temperature tolerance
 - Contained within luminaire housing
 - Designed for easy battery changes when required

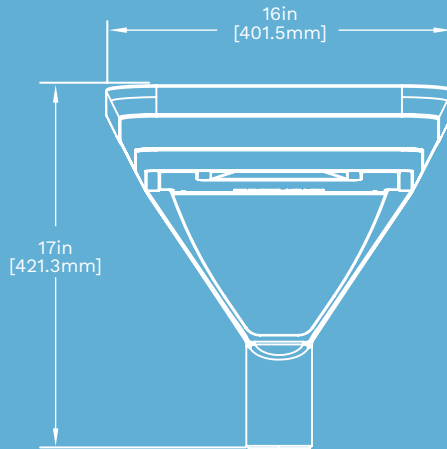
- LEDs and Optics:**
- 100,000 hour L70 lifetime
 - Warm (3000K) and neutral (4500K) white color temperatures available
 - High efficiency Type 2, 3, 4 and 5, full cut-off optics
 - Typical lumen output from 850 to 1200 lumens

- Mechanical Construction:**
- Cast, low copper aluminum top, housing, and arms
 - Stainless fasteners with security fastener option
 - Architectural grade, super durable, TGIC powder coat
 - Four standard colors with custom colors available

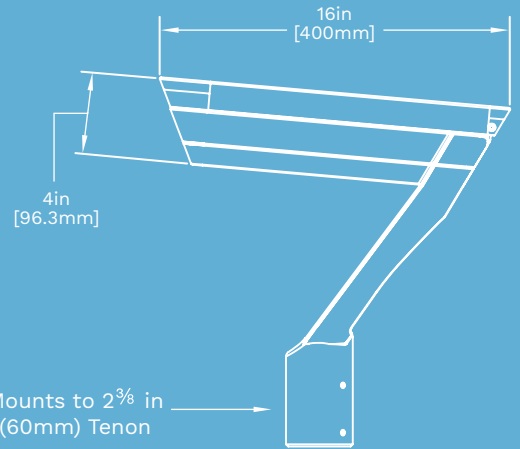
- Factory Set Lighting Profiles:**
- On at dusk, off at dawn
 - On at dusk, off after 6 hours
 - On at dusk, dim to 30% after 6 hours till dawn
 - On at dusk, off after 5 hours, on 1 hour before dawn
 - On at dusk, dim to 30% after 5 hours, on 1 hour before dawn

EPA: 0.65ft² (0.06m²)

Weight: 27 lbs (12.3 kg) including battery



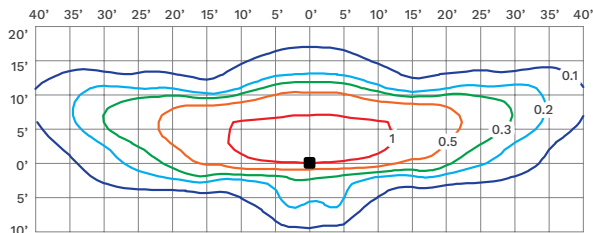
Front View



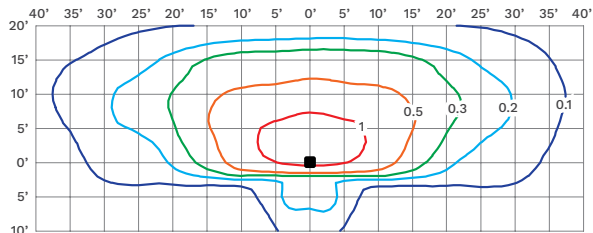
Side View

12
3.66
—
10
3.05
—
8
2.44
—
6
1.83
—
4
1.22
—
2
0.61
—
ft
m

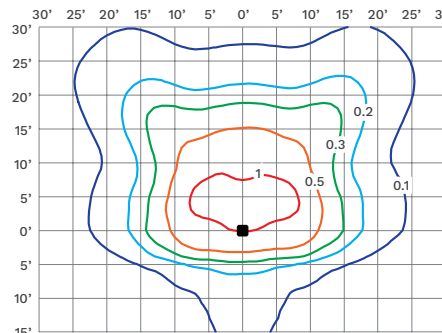
PHOTOMETRICS (IES files available on request)



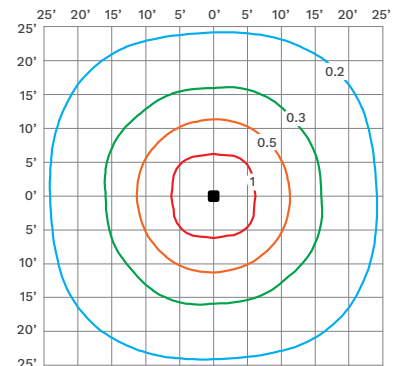
IPL - Type 2



IPL - Type 3



IPL - Type 4



IPL - Type 5



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ORDER MATRIX



Series	Mounting	Finish	Distribution	LED Color	Lighting Profile	Options
IPL	PTM - Post Top Mount	BK - Black	T2 - Type 2	WW - 3000K	00 - Dusk till dawn	SEC - Security Fasteners
		BZ - Bronze	T3 - Type 3	NW - 4500K	01 - Dark +6 hours then off	
		SV - Silver	T4 - Type 4		02 - Dark +6 hours then 30%	
		WH - White	T5 - Type 5		03 - Dark +5 hours, off, Dawn -1 hour	
		CC - Custom			04 - Dark +5 hours, 30%, Dawn -1 hour (DEFAULT)	

Notes:

- Photometrics based on 12 ft mounting height
- Specifications subject to change without notice
- All light levels in foot candles (fc) with 4500K color temperature and 850 lumen output
- To convert to lux multiply light level by 10.7



Illuminating
ENGINEERING SOCIETY



lighting facts
A program of the IES

SOLAR LED INTEGRATED COMMERCIAL AREA LIGHT

Project: _____

Type: _____

Quantity: _____

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The SCL series solar LED luminaire is a great fit for commercial, recreational bikeway/pathway and public space lighting applications. The self-contained, unobtrusive design integrates its solar power, adaptive control and LED technologies into a compact and efficient form. With robust construction, and unequalled performance the SCL series is an excellent fit wherever cost effective, full cutoff lighting is required.

Utilizing solar power and LEDs, the SCL series is completely self-contained and offers significant benefits:

- Cost effective design ships fully assembled and installs in minutes
- Low installation cost and minimal site impact with no trenching, cabling or wiring
- Minimal ongoing costs with no electrical bills or bulbs to change
- Operates entirely independent from the grid and is immune to power outages
- A sustainable choice without recurring carbon emissions

All of our solar powered lights are enabled by our innovative Solar Lighting Controller (SLC). The SLC in each light is “self-learning” and allows the lights to predictively adapt to their surroundings, providing a level of lighting performance and reliability unavailable in other solar lighting products.

TECHNICAL SPECIFICATIONS

Solar Module:

- High-efficiency mono-crystalline cells
- Inconspicuously integrated into the top of luminaire
- Used for day/night detection (no photocell required)

Solar Lighting Controller (SLC):

- High-efficiency, temperature compensated Maximum Power Point Tracking (MPPT)
- Micro-controller based technology
- Includes high-efficiency LED driver
- Multiyear data logging
- Integrated into luminaire housing
- Designed to automatically and adaptively manage lighting performance based on environmental conditions and lighting requirements
- Patent Pending

Battery:

- High performance Lithium (LiFePO₄)
- Exceptional 8 – 10 year life cycle
- High temperature tolerance
- Contained within luminaire housing
- Designed for easy battery changes when required

LEDs and Optics:

- 100,000 hour L70 lifetime
- Warm (3000K) and neutral (4500K) white color temperatures available
- High efficiency Type 2, 3, 4 and 5, full cut-off optics
- Typical lumen output from 850 to 1200 lumens

Mechanical Construction:

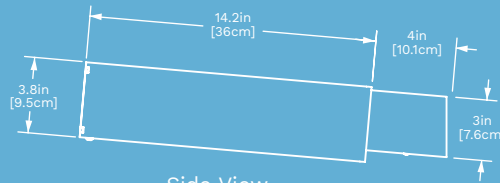
- Formed, low copper aluminum enclosure, and mounting arm
- Stainless fasteners with security fastener option
- Architectural grade, super durable, TGIC powder coat with Alodine undercoat
- Four standard colors with custom colors available

Factory Set Lighting Profiles:

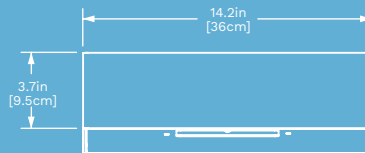
- On at dusk, off at dawn
- On at dusk, off after 6 hours
- On at dusk, dim to 30% after 6 hours till dawn
- On at dusk, off after 5 hours, on 1 hour before dawn
- On at dusk, dim to 30% after 5 hours, on 1 hour before dawn

EPA: 0.52ft² (0.05m²)

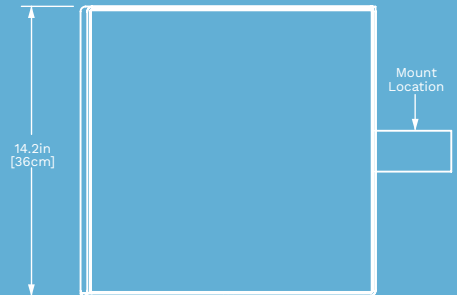
Weight: 25 lbs (11.4kg) including battery



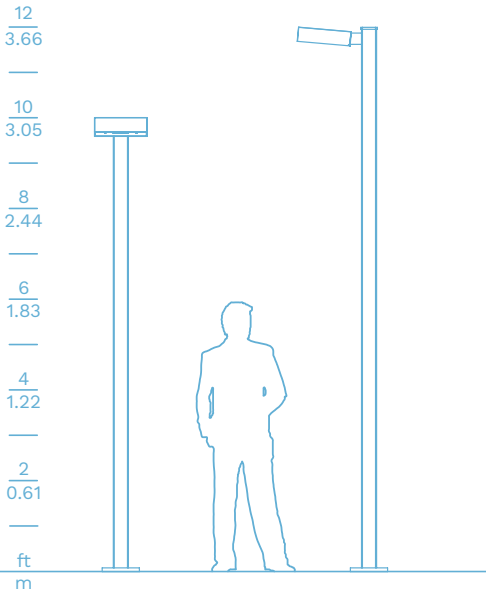
Side View



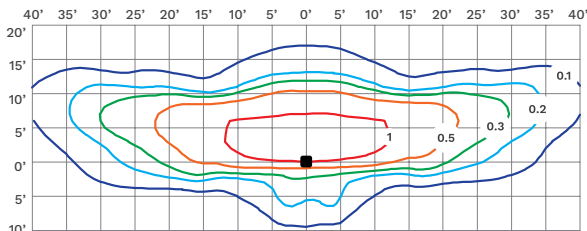
Front View



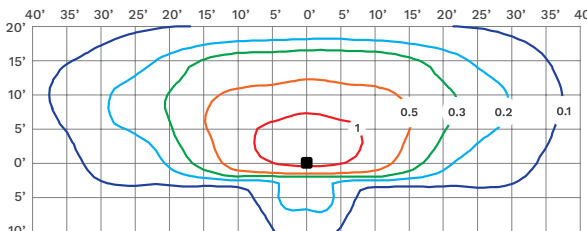
Top View



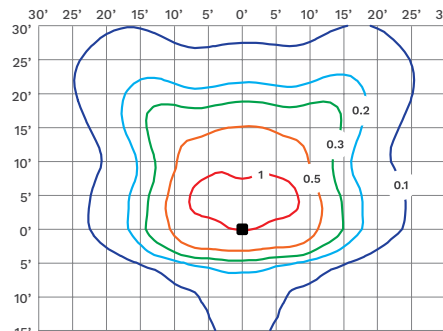
PHOTOMETRICS (IES files available on request)



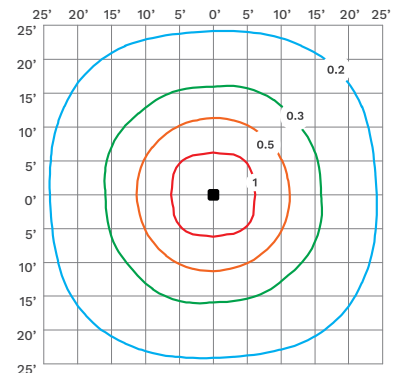
SCL - Type 2



SCL - Type 3



SCL - Type 4



SCL - Type 5

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8A UDBE WOSB SB HUBZone

GSA Contract Holder
GS-07F-182GA



ORDER MATRIX

Series	Mounting	Finish	Distribution	LED Color	Lighting Profile	Options
SCL	SPMS - Side Pole Mount Square	BK - Black	T2 - Type 2	WW - 3000K	00 - Dusk till dawn	SEC - Security Fasteners
		BZ - Bronze	T3 - Type 3	NW - 4500K	01 - Dark +6 hours then off	
		SV - Silver	T4 - Type 4		02 - Dark +6 hours then 30%	
		WH - White	T5 - Type 5		03 - Dark +5 hours, off, Dawn -1 hour	
		CC - Custom			04 - Dark +5 hours, 30%, Dawn -1 hour (DEFAULT)	

Notes:

- Photometrics based on 12 ft mounting height
- Specifications subject to change without notice
- All light levels in foot candles (fc) with 4500K color temperature and 850 lumen output
- To convert to lux multiply light level by 10.7



illuminating
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LED lighting facts
A COMMITMENT TO EXCELLENCE

Project:

Type:

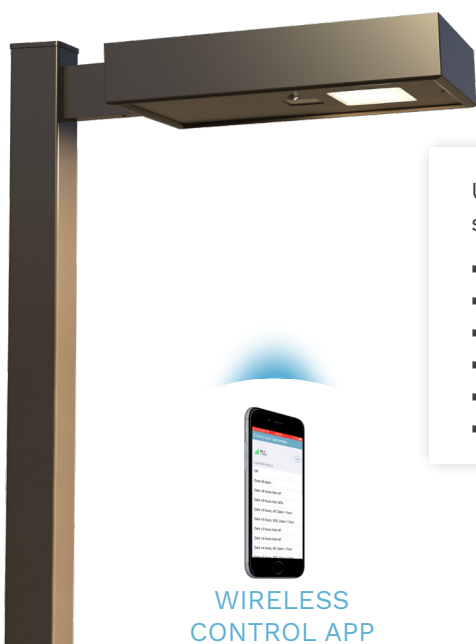
Quantity:

The SCL2 Series solar LED luminaire is a great fit for commercial, parking lot, recreational bikeway/pathway and public space lighting applications. The self-contained, unobtrusive design integrates its solar power, adaptive control and LED technologies into a compact and efficient form. With robust construction, and unequalled performance the SCL2 series is an excellent fit wherever cost effective, full cutoff lighting is required.

Utilizing solar power and LEDs, the SCL2 series is completely self-contained and offers significant benefits:

- Cost effective design ships fully assembled and installs in minutes
- Smart Connect provides wireless control & communication with your light
- Low installation cost and minimal site impact with no trenching, cabling or wiring
- Minimal ongoing costs with no electrical bills or bulbs to change
- Operates entirely independent from the grid and is immune to power outages
- A sustainable choice without recurring carbon emissions

All of our solar powered lights are enabled by our innovative Solar Lighting Controller (SLC). The SLC in each light is “self-learning” and allows the lights to predictively adapt to their surroundings, providing a level of lighting performance and reliability unavailable in other solar lighting products.



WIRELESS
CONTROL APP

TECHNICAL SPECIFICATIONS

Solar Module:

- High-efficiency mono-crystalline cells
- Inconspicuously integrated into the top of luminaire
- Used for day/night detection (no photocell required)

Solar Lighting Controller (SLC):

- High-efficiency, temperature compensated Maximum Power Point Tracking (MPPT)
- Micro-controller based technology
- Includes high-efficiency LED driver
- Multiyear data logging
- Integrated into luminaire housing
- Designed to automatically and adaptively manage lighting performance based on environmental conditions and lighting requirements
- Patent Pending

Battery:

- High performance Lithium (LiFePO₄)
- Exceptional 8 – 10 year life cycle
- High temperature tolerance
- Contained within luminaire housing
- Designed for easy battery changes when required

LEDs and Optics:

- 100,000 hour L70 lifetime
- Warm (3000K) and neutral (4500K) white color temperatures available
- High efficiency Type 2, 3, 4 and 5, full cut-off optics
- Typical lumen output from 2250 to 2830 lumens

Mechanical Construction:

- Extruded and formed, low copper aluminum enclosure, and mounting arm
- Stainless fasteners with security fastener option
- Architectural grade, super durable, TGIC powder coat
- Four standard colors with custom colors available

Factory Set Lighting Profiles:

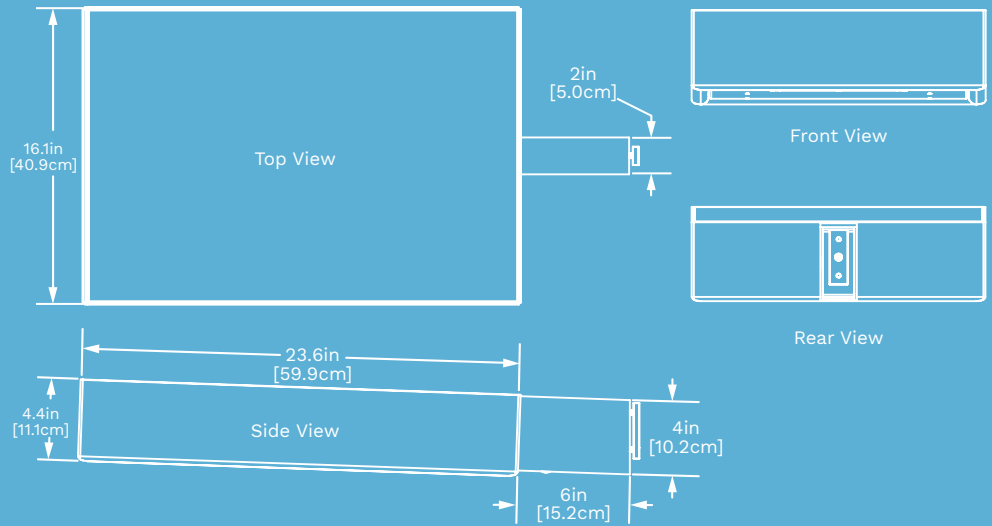
- 11 Standard Profiles Available
- Dusk +3 hours, Dim 30%, Dawn -1 hour- Default
- Visit our website for more details
- Field Configurable with app

Wireless Controls:

- Bluetooth Low Energy interface with iOS app
- Provide configuration and control of lighting profiles
- Adjustment over dusk and dawn thresholds
- Motion sensing capabilities to optimise performance based on usage

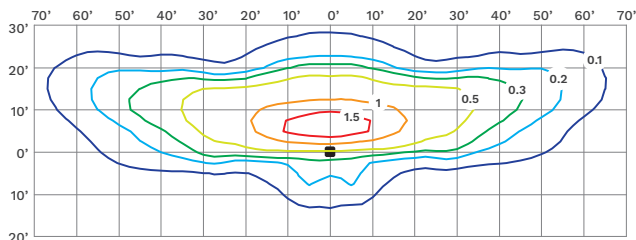
EPA: 0.99ft² (0.09m²)

Weight: 34 lbs (15.4kg) including battery

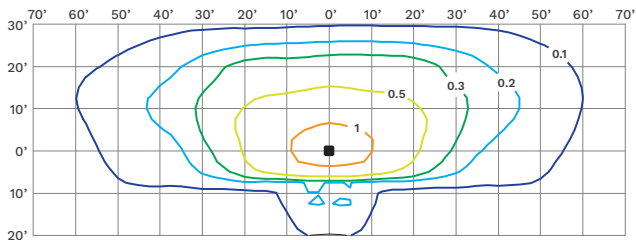


PHOTOMETRICS (IES files available on request)

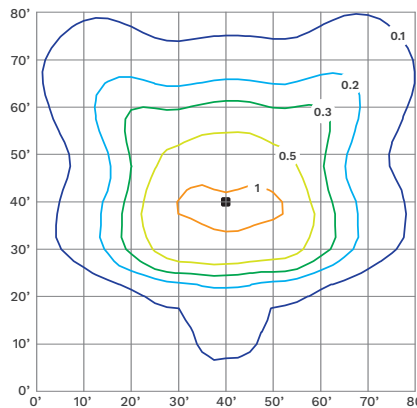
If you have any questions, please don't hesitate to call us toll free at 1-844-279-8754 (USA & Canada).



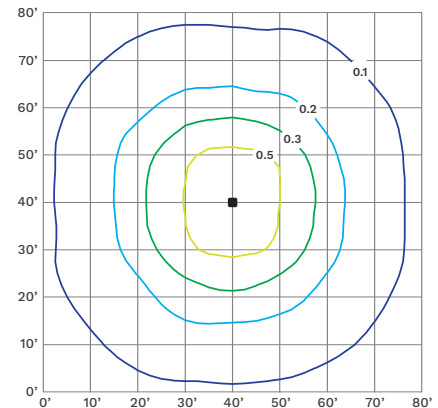
SCL2 - Type 2



SCL2 - Type 3



SCL2 - Type 4



SCL2 - Type 5

ORDER MATRIX

Series	Mounting	Finish	Distribution	LED Color	Lighting Profiles (Common)	Options
SCL2	SPMS - Side Pole Mount Square	BK - Black	T2 - Type 2	WW - 3000K	00 - Dusk till dawn	SEC - Security Fasteners
	SPMR - Side Pole Mount Round	BZ - Bronze	T3 - Type 3	NW - 4500K	01 - Dark +6 hours then off	MSO - Motion Sense Off
		SV - Silver	T4 - Type 4		02 - Dark + 6 hours, Dim 30%	
		WH - White	T5 - Type 5		03 - Dark + 5 hours, OFF, Dawn - 1 hour	
		CC - Custom			04 - Dark + 5 hours, Dim 30%, Dawn - 1 hour	
					09 - Dark + 3 hours, 30%, Dawn -1 hour (DEFAULT)	

Notes:

- Photometrics based on 20 ft mounting height
- All light levels in foot candles (fc) with 4500K color temperature and 2000 lumen output
- To convert to lux multiply light level by 10.7
- Contact FLT for additional profiles
- Motion sensing is ON by default
- Specifications subject to change without notice



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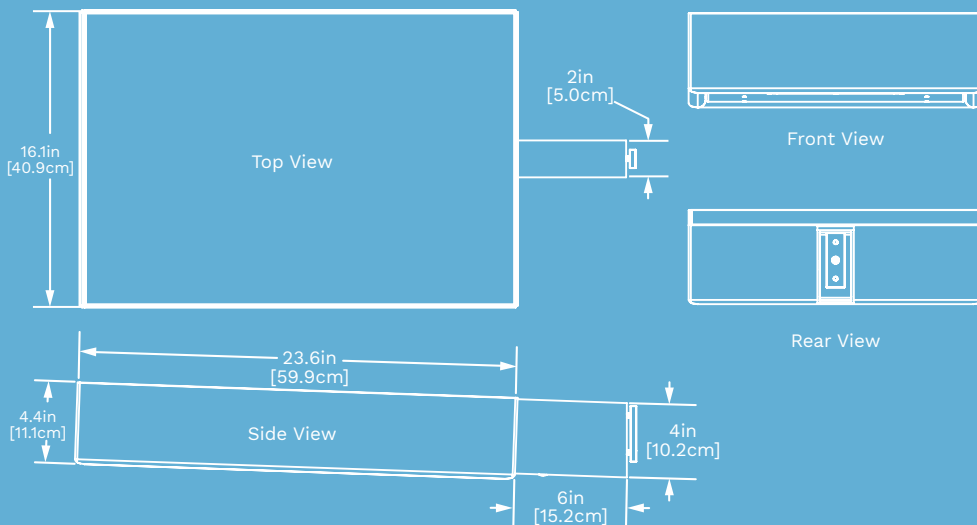


LED lighting facts
A COMMITMENT TO EXCELLENCE

SCL2 Series SOLAR LED INTEGRATED COMMERCIAL AREA LIGHT

EPA: 0.99ft² (0.09m²)

Weight: 34 lbs (15.4kg) including battery



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Field Configurable Lighting Profiles



Lighting Profile Number	Lighting Profile	Description
00	Dusk till dawn	On at dusk, off at dawn
01	Dark +6 hours then off	On at dusk, off after 6 hours
02	Dark +6 hours then 30%	On at dusk, dim to 30% after 6 hours till dawn
03	Dark +6 hours then 30%	On at dusk, off after 5 hours, on 1 hour before dawn
04	Dark +5 hours, 30%, Dawn -1 hour	On at dusk, dim to 30% after 5 hours, on 1 hour before dawn
05	Dark +3 hours then off	On at dusk, off after 3 hours
06	Dark +4 hours then off	On at dusk, off after 4 hours
07	Dark +4 hours, off, Dawn -1 hour	On at dusk, off after 4 hours, on 1 hour before dawn
08	Off	Off
09	Dark + 3 hours, 30%, Dawn -1 hour (default)	On at dusk, dim to 30% after 3 hours, on 1 hour before dawn (default)
10	Dusk till dawn, 30%	30% at dusk, off at dawn
Motion Sensing 'ON' Enabled	Default all profiles	Off to On or Dim to On when motion is sensed
MSO	Motion Sensing Off	No motion sensing activations

Mac Sol Solar Powered LED Bollard

FIXTURE TYPE: _____

PROJECT NAME: _____



Glulam solid wood bollard with solar powered LED light source.

FEATURES:

- Low installed cost, no trenching, cabling or wiring
- No electric bills, no lamp replacement
- Provides a visibly green statement with no ongoing carbon emissions
- Certified by Forest Stewardship Council (FSC)
- Automatically manages performance based on environmental conditions

SPECIFICATIONS:

HOUSING: Solid wood bollard is assembled through glulam construction and precision machined using CNC technology. Adhesive complies with ASTM D-2559 glulam construction specifications for extreme exposed weather conditions and is waterproof and rated for wet or dry use exposure.

Glulam wood is fastened to a concrete anchor bolt base with concealed hardware accessible from top access plate. Anchor bolt kit includes (4) hot dip galvanized anchor bolts and fasteners and a ridged concrete pour template.

SOLAR MODULE: Panel integrated into the top cap encapsulated in a high impact, UV resistant, polycarbonate.

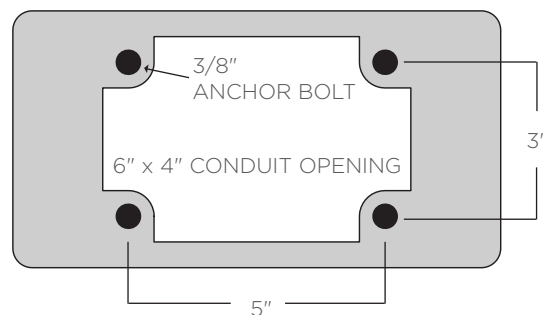
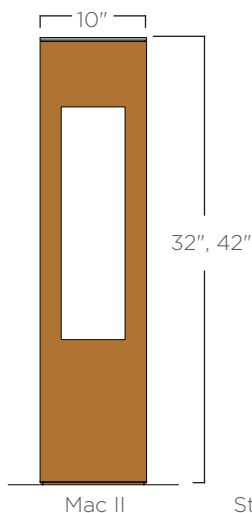
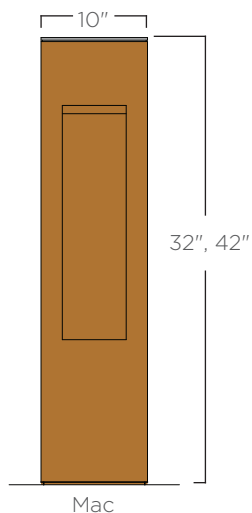
BATTERY: High performance Lithium battery. Exceptional 8 to 10 year life cycle. High temperature tolerance with a -4°F winter rating. Contained within the bollard and designed for easy changes when required.

OPTICAL SYSTEM: Three high-output LEDs with a combined lumen output of 130 lumens in 3000K or 4300K with a 50,000 hour L70 life.



FINISHES AND MATERIALS: Woods are finished with a low VOC waterborne matte exterior finish containing UV and mildew inhibitors. All aluminum parts are polyester powder coat painted.

HARDWARE: Fasteners are stainless steel. Anchor bolt kits are hot dip galvanized.



Standard Concrete Foundation or Optional Screw-In Bollard Foundation⁽¹⁾

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ORDERING GUIDE: EXAMPLE: M II SOL-42-L43S-S1-BLKTX-00-SCW



1	Series	4	Wood Finish	6	Lighting Profile
M SOL	Solar Mac	S*	See color options on finishes technical sheet	00	Dusk 'til Dawn
M II SOL	Solar Mac II			01	Dark +6 hours then off
2	Overall Height	5	Metal Finish	02	Dark +6 hours then 30%
32	32"	BLKTX	Black Texture	03	Dark +5 hours, off, Dawn -1 hour
42	42"			04	Dark +5 hours, 30%, Dawn -1 hour (DEFAULT)
3	Color Temperature			7	Special
L30S	3000K LED			STD	Standard
L43S	4500K LED			MOD	Modified

1. Spec sheet for Screw-In Bollard Foundation is available in the Accessories section.

wood finishes

UNFINISHED



NA - Natural Unfinished
New



Unfinished after 1 Year

FINISHED



S1 - Garapa



S2 - Teak



S3 - Cumaru



S4 - Ipe



S5 - Jarrah



S6 - Mahogany



S7 - Ebony



S8 - Weathered Grey

All colors are shown on Accoya® wood. Accoya® does not require a finish for durability. Unfinished wood over time will develop a silver-grey patina. Color finishes are a four step application of stain and clear matte top coat. UV inhibitors and mildewcides are included providing superior longevity. Weathered grey is a single application of grey stain without the clear matte top coat. This provides a weathered grey initially that fades, allowing the natural grey color to develop.

made with:



Accoya® and the Trimarque Device are registered trademarks owned by Titan Wood Limited, a wholly owned subsidiary of Accsys Technologies PLC, and may not be used or reproduced without written permission.



The mark of
responsible forestry
FSC® C102326

Environmentally friendly · Lower cost outdoor lighting

www.solarbollards.com

SOLAR LIGHTING AND GROUND SCREWS:

FASTER INSTALLATION, STRENGTH AND DURABILITY, LOWER COST, ENVIRONMENTALLY SOUND

Advanced technology solar lighting installed with a ground screw foundation makes a lot of sense in today's competitive, cost conscious and environmentally aware construction, rehabilitation and landscape industries.

This proven combination of assets gives you an edge by eliminating:

- Ditching and wiring
- Foundation excavation
- Concrete curing time
- Extensive cleanup
- Site remediation

We will help you with more information, specifications, and the other details you need. Give us a call and let's get started.

Our ground screw foundations use the natural compression of the earth for strength and stability.

Unlike concrete foundations which disturb the site with excavation and require waiting for concrete delivery and curing time, we install ground anchors in minutes with minimal site disturbance, at a lower cost.

When used with solar lighting, the need for wiring trenches is completely eliminated.

Call us today for details.



The WLB bollard provides a wide angle of light for area illumination. It is simply and quickly installed with our proven ground anchors.



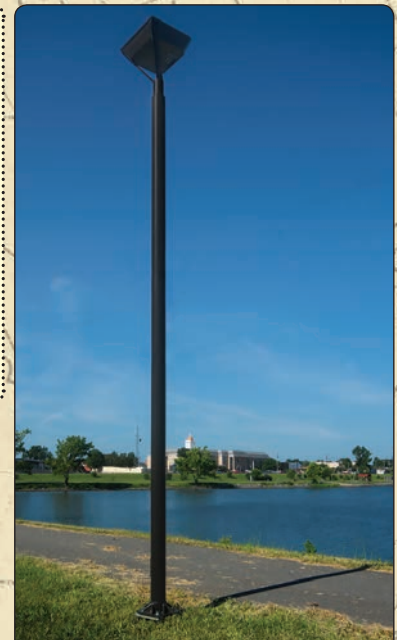
The PLB bollard points light downward to illuminate pathways, sidewalks, trails, ramps, and anywhere else dependable easy-to-install lighting is needed.



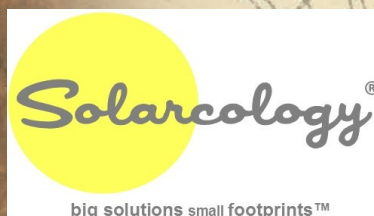
Solar lighting installed with a ground screw foundation is the ideal solution for retro-fit installations. There is no yard excavation for wiring or foundation, no waiting for concrete to cure and minimal clean-up with lower cost. All of which make for happy customers.

TURN-KEY INSTALLATION

Call us and find out more about our turn-key installation services. Our crews will install your lights or ours with ground anchors. You have no investment in training or equipment.



This solar-ground screw foundation setup in a public park took only 30 minutes with no environmental disturbance.



GROUND SCREW FOUNDATION INSTALLATION IS EASY



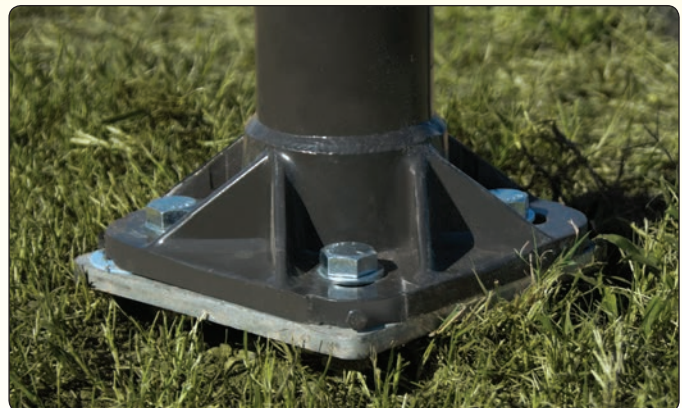
The customer on this job was delighted to find out that she could have driveway illumination without tearing up her yard. The installation here took just over 30 minutes and left no evidence of the crew having been in her yard other than the presence of a brand new fully-functional drive way light fixture.



Ground screw foundation installation is fast and clean, requiring no excavation, no concrete, and no waiting for the "cure." Installations can be made in many inclement weather conditions which would otherwise cause postponement. Ground screws can be installed with other equipment in addition to the above.



These PLB bollards provide attractive lighting to this garden sidewalk. With ground screw foundation installation, no ditching or excavation was required.



Ground screw foundation top mounting plates are made of high-quality steel for exceptional strength — with heavy galvanizing for long, dependable service. This installation is in a public recreation area.



big solutions small footprints™



Solar MAC 5-Star Luxury Resort



SCL2 Bluetooth Residential Parking Lot



SCL2 Bluetooth Windward University



SCL & SCL2 Coconut Tree Mount



PLB



PLB



IPL & PLB



SCL

Community Pathways, Private Roads and Parks



Reception Gardens Day and Night, SCL2 Coconut Tree Install 25' Type III 4500K LED



big solutions small footprints™

Tiki Cabana Post Poolside. SCL Coconut Tree Install 15' Type III 3000K LED.



Unlit playground, subject to vandalism and night time loitering; unsafe and unwelcoming to community.



Driving a leveled drill bit to guide the ground screw.



Drilling the Ground screw



Ground screw flush with earth, ready for pole and fixture installation.



20'x5" Square Pole secured to ground screw flange.

Contact:

Lia Young Hunt
lia@solarbollards.com
 808.738.4902
www.solarbollards.com
www.solarcology.com for our array of solar devices
 in Aviation, Traffic, Marine and Pavement



WIRELESS
CONTROL APP

No Digging. No Concrete. No Worries.

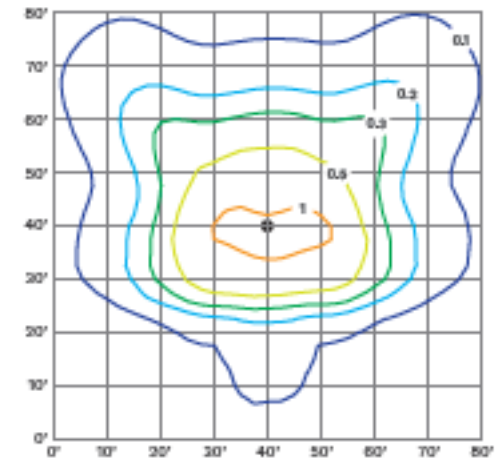
Simply Intelligent Systems. You're welcome.



Site 1



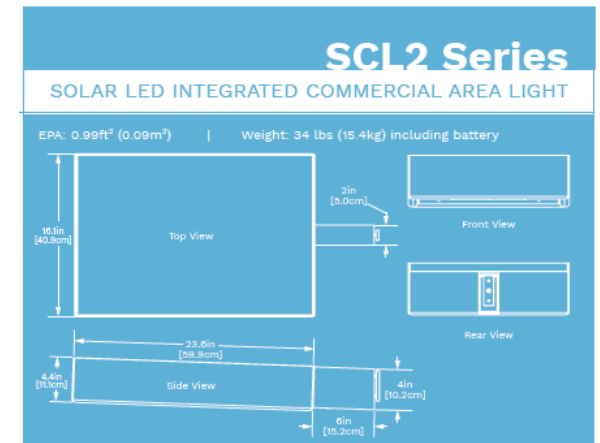
Site 2



SCL2 - Type 4



Completed Project
Total installation hours: 1:20



Simply Intelligent Systems. You're welcome.