

# Solar Powered LED Bollard

SWPDL



# SYSTEM BENEFITS SWPDL



## OFF-GRID ARCHITECTURAL LIGHTING

Fully autonomous solar bollard for pathways, parks, and residential landscapes.

Eliminates trenching and grid connection.

Clean architectural integration with reliable off-grid performance.



## HIGH-EFFICIENCY LED PERFORMANCE

Up to 20W LED output  
Up to 3,000 lumens  
3000K or 4000K

Dusk-to-dawn operation

Adaptive dimming based on solar input



## INTEGRATED SMART ENERGY SYSTEM

MPPT (Maximum Power Point Tracking) solar charge controller for optimized energy harvesting.

Integrated lithium battery system (up to 20AH).

Energy managed by built-in control algorithm.



## VERTICAL CIGS SOLAR WRAP TECHNOLOGY

CIGS amorphous flexible solar panel wrap integrated directly onto the pole.

Up to 80W solar capacity.

Curved vertical design improves wind resistance and self-cleaning performance.

IP65 rated for outdoor durability.

# ADVANCED VERTICAL TECHNOLOGY

## Rugged Architectural Bollard Structure

- Designed for long-term outdoor installation
- Integrated CIGS amorphous flexible solar wrap
- Up to 80W total solar capacity
- Engineered for parks, pathways, and residential landscapes
- Pole height up to 9.8FT

## 360° Vertical Solar Wrap

- CIGS amorphous flexible solar panel wrap integrated onto the pole
- Curved vertical design improves wind resistance
- Self-cleaning surface design
- Optimized solar exposure

## Integrated LED Lighting

- LED power - up to 20W
- Up to 3,000 lumens
- Available in 3000K or 4000K
- IP65 rated
- Engineered for architectural and pathway illumination

## Smart Power Control

- MPPT (Maximum Power Point Tracking) solar charge controller
- Lithium battery system - up to 20AH
- Dusk-to-dawn operation
- Adaptive dimming based on solar input
- Low-maintenance autonomous operation



# Warranty & Reliability

## SWPDL

The SWPDL system is engineered for reliable long-term outdoor operation in architectural and landscape environments.

All major system components are selected and tested to ensure durability, performance consistency, and compliance with applicable standards.

Component	Warranty Coverage
Solar Modules	5-year workmanship warranty. 10/25-year limited power output warranty in accordance with manufacturer specifications.
Battery System	Warranty subject to battery manufacturer specifications. Service life dependent on operating conditions and charge cycles.
LED Luminaire, MPPT Controller & Smart Electronics	Manufacturer warranty - coverage period subject to component specifications.
Pole & Structural Components	Engineered for outdoor durability and wind resistance. Project-specific engineering documentation available upon request.

Warranty terms may vary based on system configuration and project conditions. Full warranty details available upon request.

# Applications & Use Cases

## SWPDL

**Parks & Public Spaces** - Provides architectural pathway illumination for pedestrian areas and landscaped environments.

**Pathways & Walkways** - Ideal for residential and community walkways requiring off-grid lighting.

**Bike Lanes** - Enhances visibility along dedicated cycling paths.

**Residential Communities** - Suitable for gated communities, private roads, and landscape features.

**Golf Courses & Resorts** - Blends into natural surroundings while delivering reliable dusk-to-dawn lighting.

**Marinas & Waterfront Areas** - Corrosion-resistant, off-grid solution for coastal environments.

*This system is designed for architectural and landscape lighting applications.  
Not intended for high-speed roadway illumination.*

# Technical Overview

## SWPDL

- **Solar module type** - CIGS amorphous flexible solar wrap integrated onto the pole
- **Total solar power** - Up to 80W
- **Solar charge controller** - MPPT (Maximum Power Point Tracking) controller
- **Battery type** - Lithium (LiFePO) battery system
- **Battery capacity** - Up to 20Ah
- **LED power** - Up to 20W
- **Luminous output** - Up to 3,000 lumens
- **CCT options** - 3000K or 4000K
- **Operation profile** - Dusk-to-dawn (dimming based on solar radiation)
- **IP rating** - IP65
- **Operating temperature** - -4°F to 140°F

*Final system configuration may vary based on site conditions and project requirements.*

# HOW TO SPECIFY & ORDER

The SWPDL solar bollard system is configurable based on site conditions, solar exposure, required light output, and operating profile.

- **DEFINE SITE CONDITIONS AND INSTALLATION ENVIRONMENT**

Evaluate installation location, solar exposure, pole height, and application type.

- **SELECT LIGHT OUTPUT AND CCT**

Choose LED power (up to 20W) and color temperature (3000K or 4000K).

- **CONFIGURE SOLAR AND BATTERY CAPACITY**

Determine required solar capacity (up to 80W) and battery capacity (up to 20Ah) based on runtime requirements.

- **CONFIRM FINAL CONFIGURATION AND ASSIGN MODEL CODE**

Each approved configuration is assigned a unique SolarPath model code for production and ordering.

## LIGHTING DESIGN & PHOTOMETRIC SUPPORT

Photometric data and layout support available upon request to assist with proper spacing and light distribution.

## IMPORTANT NOTES

- System performance depends on solar exposure and operating profile.
- Specifications shown are representative and may vary by configuration.
- Final configuration subject to engineering review prior to manufacturing.

# ORDERING GUIDE

Each approved SWPDL configuration is assigned a unique SolarPath configuration code for manufacturing and ordering reference.

**Example: SWPDL-80W-20W-30K-20AH-9.8FT-SLV-UN**

Model	Solar Panel	Led Power	LED Color Temp	Battery Capacity	Pole Height	Body Color	LED Location
SWPDL	80W	20W	30K 40K	20Ah	9.8 FT	SLV-Silver  GR-Grey  *Other colors available upon request	UN - LED module below solar wrap  OV - LED module above solar wrap

*All system configurations are subject to solar exposure, site conditions, and final engineering approval prior to manufacturing.*



# Contact Us

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