

HIGHLIGHT SPSSB-SUN

**Vertical Solar Integration – Autonomous, Off-Grid
Lighting**

POWERFUL BENEFITS: WHY BEAT THE GRID FOR AREA & PEDESTRIAN LIGHTING?



SAVES MONEY FROM DAY ONE

Eliminates trenching, wiring, and grid connection costs from day one. No utility bills, no infrastructure delays, and no ongoing electricity expenses.



RELIABLE NIGHTTIME OPERATION

Fully off-grid solar lighting with intelligent MPPT energy management and optimized battery utilization.



NO SCHEDULED MAINTENANCE REQUIRED FOR 10+ YEARS

Advanced battery technology and smart system design enable long-term, maintenance-free operation. Designed for reliable performance in demanding environments.



VERTICAL SOLAR INNOVATION

The 360° vertical solar wrap maximizes energy capture while maintaining a clean, architectural design. No exposed panels, no wire theft risk, and minimal visual impact.

ADVANCED VERTICAL TECHNOLOGY

Rugged Mounting Poles

- Wind-load certified pole design
- Height options: Up to 30 ft
- Suitable for street and area lighting installations

High-Performance Luminaires

- LED power: Up to 150W (up to 21,000 lm)
- Distribution types: Type I, II, III, IV, V
- CCT options: 3000K–5700K



360° Vertical Solar Wrap

- Monocrystalline silicon solar panels
- Total solar power: Up to 1,120W (4×280W)
- Vertical curved design for improved wind resistance and self-cleaning

SmartLight Power Center

- MPPT charge controller
- LiFePO₄ battery: Up to 100Ah
- Operating temperature: -4°F to 131°F
- Autonomous, solar-only operation

Warranty & Reliability

SolarPath solar lighting systems are engineered for fully autonomous, off - grid operation and long term reliability in demanding environments.

All system components are selected and tested to ensure reliability, durability, and consistent performance over time.

Component	Warranty Coverage
Solar Modules	Performance warranty up to 10 years
Battery System (LiFePO4)	Expected service life up to 10 years
LED Luminaire, MPPT Controller & Smart Electronics	Manufacturer warranty
Pole & Structural Components	Designed to meet local wind-load requirements

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

Applications & Use Cases

The HIGHLIGHT SPSSB-SUN is a high-power, fully off-grid solar lighting solution designed for roadway and area lighting applications requiring high illumination levels, robust autonomy, and minimal infrastructure dependency.

The system combines vertically integrated solar panels, MPPT charge control, and high-output LED luminaires to deliver reliable performance in demanding environments.

- **Streets Lighting** - Designed for urban and rural roadways, the SPSSB-SUN provides consistent, high-output illumination suitable for vehicular traffic and wide roadway coverage. With LED output up to 21,000 lumens and pole heights up to 30 ft, the system supports Type I-V light distributions while operating fully off-grid.
- **Parking Lots** - Ideal for large parking areas requiring uniform lighting and extended nighttime operation. The high solar capacity (up to 1,120W) and programmable dusk-to-dawn operation ensure reliable performance without trenching or grid connection.
- **Residential Roads** - Supports internal roads within residential developments, gated communities, and mixed-use projects. The autonomous operation eliminates utility coordination while providing safe, consistent illumination with selectable CCT and distribution patterns.
- **Public Parks** - Suitable for open public spaces where trenching is impractical or undesirable. The vertical solar design is wind-resistant and self-cleaning, ensuring long-term reliability with minimal maintenance in landscaped environments.
- **Sports & Large Area Lighting** - Provides powerful area lighting for sports facilities, recreational zones, and multi-use open areas. High-efficiency LED luminaires combined with configurable battery capacity support extended operation and high illumination demands.

System configuration, lighting levels, battery capacity, and pole height are defined based on project requirements, site conditions, and operational needs.

Technical Overview

System-level specifications for reference. Final configuration may vary by project.

Solar Configuration - Vertical monocrystalline solar panels integrated into the pole structure

Total Solar Power - Up to 1,120W (4×280W)

Battery Type - LiFePO₄ (Lithium Iron Phosphate)

Battery Capacity & Autonomy - Up to 100Ah, configurable.

LED Luminaire - Up to 150W (up to 21,000 lm)

CCT Options - 3000K – 5700K

Distribution Types - Type I, II, III, IV, V

Charge Controller - MPPT (Maximum Power Point Tracking)

Control Modes - Manual / Automatic / Time-based / Dusk-to-Dawn

Ingress Protection (IP Rating) - IP65

Operating Temperature Range - Designed for reliable operation in extreme environmental conditions. Typical operating range: -40°F to +158°F (configuration dependent).

Pole Height – Up to 30 ft

Mounting / Installation Options - Direct burial or anchor base mounting

Standards & Compliance - Designed to meet applicable UL and IEC standards

Final configuration may vary based on project requirements.

Product Overview



How to Specify & Order

This solar lighting product is designed as a fully configurable, project-specific solution for off-grid applications.

System configuration is defined based on site conditions, lighting requirements, and operational needs.

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

CONFIGURABLE PARAMETERS

Physical & Power

- Mounting configuration and installation method
- Solar capacity and system layout
- Battery type and capacity
- Finish, color, and environmental specifications

Lighting & Control

- LED luminaire type and optical distribution
- Lighting levels suitable for pedestrian and area lightings
- Control modes and operating logic
- Proprietary MPPT-based control architecture

HOW TO SPECIFY & ORDER

1. Define application and lighting requirements
2. Select pole height, LED power, and optical distribution
3. Define solar capacity and battery size
4. Assign configuration and part number

Each approved configuration is assigned a unique SolarPath configuration code (part number) used for manufacturing and ordering.

LIGHTING DESIGN & PHOTOMETRIC SUPPORT

Photometric layouts and lighting calculations are available upon request to support planning, compliance, and optimal performance.

IMPORTANT NOTES

- System performance depends on site conditions and solar availability
- Specifications shown are representative and may vary by configuration
- All configurations are reviewed and approved prior to manufacturing



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