

HIGH CONFIGURATION SERIES

SL-SPL-HC

Split Solar Street Light System

PUBLIC DATASHEET | MODELS SL-SPL-HC-60 / -80 / -100 / -120 | ISSUE 2026.10

Independent solar placement.
Project-configured energy storage.



Luminaire rendering. External PV, battery enclosure and mounting structure are selected separately.
200 lm/W finished-luminaire efficacy.

60–120 W	12.8 / 25.6 V	Independent	5 years
Rated LED power range	Battery-system platforms	PV and battery placement	System warranty ¹

For municipal roads, rural infrastructure, industrial access roads, off-grid sites and tender-based lighting projects.

A die-cast aluminium road luminaire is paired with an external monocrystalline PV module and an above-ground LiFePO₄ battery enclosure. Power, energy storage, control and mounting options are configured around the project brief.

¹ Warranty applies to the confirmed supplied configuration and agreed terms. Solar generation, reserve nights and lighting compliance are project-specific, not inferred from rated LED wattage.

01 / SYSTEM ARCHITECTURE

Separate the components. Configure the project.

The split arrangement allows the luminaire, solar module and battery enclosure to be placed according to lighting geometry, solar access and maintenance requirements.



Luminaire-family rendering.

Functional arrangement

PV module → MPPT control → DC light source

Battery ↔ charge / lighting control

Functional description only; not a wiring or protection diagram.

External PV

High-efficiency monocrystalline standard; bifacial monocrystalline available by project.

External storage

LiFePO₄ pack in an aluminium-alloy, IP65 battery box.

Controller enclosure

Controller installed inside the battery box with the battery system.

Road luminaire

Die-cast aluminium housing with a service-replaceable internal light-source assembly.

Above-ground battery placement

Arrangement	Project selection considerations
Pole-mounted battery box	Clamped to the pole; confirm access height, clamp design, cable route and structural loading.
At/beneath the PV bracket	Battery enclosure positioned within or beneath the module-support arrangement; confirm support, clearances and service access.

Supply scope is defined by the order schedule

The system may include the luminaire, PV module, battery, controller, enclosure, cables and brackets according to the confirmed scope. Poles, foundations and communications services are not automatically included. No underground battery arrangement is offered in this series.

PV orientation and luminaire aiming are reviewed independently. A change in battery-box position also requires a review of cable length, support details and the installation procedure.

02 / LUMINAIRE SPECIFICATION

Four powers.

Three mechanical platforms.

The same family covers 60 W, 80 W, 100 W and 120 W project configurations. Optical output and system energy must be specified separately.

Parameter	SL-SPL-HC-60	SL-SPL-HC-80	SL-SPL-HC-100	SL-SPL-HC-120
Rated LED input power	60 W	80 W	100 W	120 W
Declared efficacy ¹	200 lm/W			
LED Chip Efficacy	Up to 230 lm/W (chip level)			
Reference flux ¹	12,000 lm	16,000 lm	20,000 lm	24,000 lm
Battery-system voltage ²	12.8 V	25.6 V	25.6 V	25.6 V
Housing platform	Small	Medium	Medium	Large
Length	552 mm	614 mm	614 mm	681 mm
Width	200 mm	250 mm	250 mm	260 mm
Height	103 mm	100 mm	100 mm	103 mm
Initial pole-height guide ³	6–8 m	8–10 m	9–12 m	10–14 m
System warranty	5 years	5 years	5 years	5 years

Reference luminous flux is calculated as rated LED power × 200 lm/W, not as a substitute for model-specific photometric measurement. LED chip efficacy may reach up to 230 lm/W under a selected chip and operating condition; this is not the finished-luminaire efficacy.

² This is the battery-system nominal voltage, not an LED-board input-voltage declaration. Driver/controller and LED electrical matching are configuration-specific. ³ Mounting heights are starting points only; road geometry, luminaire aiming and matched photometry determine the acceptable layout.

Common luminaire selections

Item	Available specification
Housing and light source	Die-cast aluminium; internal light-source assembly can be replaced while retaining the external housing.
LED package / source	5050 / 5054 / 7070; OSRAM / Philips / San'an options. Exact LED part and compatible assembly confirmed for the order.
CCT	6000 K standard; 3000 / 4000 / 5000 / 6500 K also available.
Optics	Type II / Type III / Type IV options; matched photometric file required for design.
Mounting and adjustment	Side-entry or post-top; Ø60 / Ø76 / Ø83 / Ø89 mm interface options; 0–30° luminaire adjustment.
Finish colour	Dark grey / black standard appearance; project RAL colour and branding options.

Luminaire IP / IK and operating-temperature ratings are confirmed in the selected luminaire submittal. The battery-box IP65 rating does not establish the rating of the complete lighting system. Each power configuration requires its matched light-source assembly and thermal design.

03 / ENERGY CONFIGURATION

Reference solar & battery configurations

These are engineering starting configurations from the HC reference matrix—not universal factory settings or guaranteed reserve-night ratings.

Reference configuration	60 W	80 W	100 W	120 W
Selected PV power	120 W	150 W	200 W	250 W
Battery nominal voltage	12.8 V	25.6 V	25.6 V	25.6 V
Battery nominal capacity	80 Ah	55 Ah	65 Ah	80 Ah
Nominal battery energy	1,024 Wh	1,408 Wh	1,664 Wh	2,048 Wh
R01 LED energy / night ¹	390 Wh	520 Wh	650 Wh	780 Wh
Storage-only nights ²	2.10	2.17	2.05	2.10
Illustrative PV Wh/day ³	432 Wh	540 Wh	720 Wh	900 Wh

Calculation basis

R01: 3 h at 100% + 2 h at 70% + 7 h at 30% = 12 h of operation and **6.5 equivalent full-power hours**. LED-only nightly energy = rated LED power × 6.5 h.

Storage reference: nominal battery Wh × 80% ÷ LED-only nightly Wh. **PV reference:** selected PV W × 4.5 equivalent full-sun hours/day × 80% assumed energy yield.

¹ Assumes LED electrical input scales with dimming percentage. ² No daytime recharge; auxiliary demand, downstream conversion/cable loss, temperature derating and ageing are not separately modelled. These values can overstate real autonomy. ³ Illustrative site assumption only, not an irradiance assessment; no bifacial gain is credited.

Recharge margin matters as much as storage size

The 80 W reference has only 20 Wh/day between the illustrative PV yield and the LED-only demand. Added system loads or a poorer solar month can remove that margin. Confirm daily balance and recovery after low-sun periods before selecting the PV and battery configuration.

Reserve-night and PV selection

Project requirement	Configuration approach
2–3 reserve nights	Confirm the allowed output programme, usable capacity and daily recharge; the table above does not demonstrate 3 nights.
4–5 reserve nights	Recalculate battery capacity, PV requirement, night-time demand and recovery. Do not apply the reference batteries unchanged.
PV power options	100 / 120 / 150 / 200 / 250 W within the current range. Capacity, electrical compatibility and mounting are selected for the project.
Battery capacity options	LiFePO ₄ pack capacity can be specified to the project; final dimensions, mass and enclosure compatibility are confirmed before order.

Reserve nights must include a minimum acceptable light-output level. “Light still on” at reduced output is not the same requirement as full-power operation or continued compliance with the road-lighting target.

04 / OPTICS & CONTROL

Select the optic before setting the pole layout.

Rated power and light-source efficacy alone do not establish road illuminance or uniformity. The selected optic, mounting geometry and operating output must be reviewed together.



Front-view product rendering. The final LED layout follows the selected assembly.

Road-lighting choices

Distribution options: Type II / Type III / Type IV.

Standard CCT: 6000 K.

Other CCTs: 3000 / 4000 / 5000 / 6500 K.

Request the photometric file for the confirmed model and optic. A picture of a lens, a generic beam angle or a different product's IES file is not a substitute for matched photometry.

Submit road width, pole height and spacing, overhang, aiming and target criteria before finalizing a layout. Where night output is reduced, review the corresponding lighting result as well as battery reserve.

Finished luminaire efficacy: 200 lm/W. Selected LED chip efficacy: up to 230 lm/W. Chip-level efficacy must not be used as a substitute for finished-luminaire performance.

Control architecture

Function / level	Specification
Base solar controller	MPPT controller selected for the PV module and 12.8 V or 25.6 V battery platform.
Lighting programme	Time control, light control and programmable dimming; multiple schedule choices.
Smart control option	Smart MPPT combines charging control with the selected programmable / communication functions; "smart" and "MPPT" are not competing charge technologies.
Connectivity options	4G / GPS / remote monitoring according to project scope; compatible controller and communications hardware are required.
Controller location	Inside the IP65 aluminium-alloy battery enclosure, together with the battery system.

Control choices to freeze with the order

Confirm the night length, full-output periods, minimum late-night output, motion requirements where relevant, communication coverage and required monitoring functions. Record the final programme separately from the base model code.

Keep the optical and energy submissions linked

The light source, optic, dimming programme and solar/battery configuration must describe the same ordered system. No IES curve or DIALux result is reproduced in this datasheet before that model-specific file is available.

05 / MECHANICAL PLATFORM

Dimensions and mounting

The small, medium and large mechanical platforms are assigned to the HC powers below. Dimensions originate from the supplied platform drawing and confirmed HC mapping.



Original L / W / H identification drawing. Not to scale. Side profile from the supplied product illustration.

HC model	Platform	L × W × H (mm)	Housing-kit mass ¹
SL-SPL-HC-60	Small	552 × 200 × 103	2.3 kg
SL-SPL-HC-80	Medium	614 × 250 × 100	3.1 kg
SL-SPL-HC-100	Medium	614 × 250 × 100	3.1 kg
SL-SPL-HC-120	Large	681 × 260 × 103	3.6 kg

¹ The source labels these figures as housing-kit weights. They are not confirmed complete-luminaire net weights and exclude any assumption about the solar module, battery box, cables or pole. Final assembled weights are recorded in the order packing list.

Mounting item	Selection
Luminaire entry	Side-entry and post-top supported with the selected mounting arrangement.
Pole-interface options	Ø60 / Ø76 / Ø83 / Ø89 mm; confirm the actual pole and correct adaptor.
Luminaire adjustment	0–30°.
PV bracket adjustment	Typically 0–45°; final tilt and support arrangement by latitude, site conditions and project design.
Battery enclosure	Aluminium alloy, IP65; pole-clamped or at / beneath the PV support.

Packaging and structural coordination

Housing-kit package references: small 582 × 230 × 133 mm; medium 644 × 280 × 130 mm; large 711 × 290 × 133 mm. These are not whole-system shipping dimensions. PV, battery, brackets and pole items are packed according to the order scope.

Pole strength, PV projected area, battery-box loading and foundations require project-specific structural review. No fixed system wind-speed rating or universal pole spacing is established by the luminaire dimensions.

06 / INSTALLATION & SERVICE

Plan access before installation.

Confirm the pole layout, solar orientation, battery enclosure position and cable route before the equipment reaches site.

Installation coordination

1. Check the configuration

Match luminaire, battery voltage, controller, PV electrical characteristics, optics and brackets to the confirmed order.

2. Position and secure the equipment

Use the approved pole / support details and fixing instructions. Keep access to the above-ground battery enclosure.

3. Commission the selected programme

Check the connections, restore the programmed output, verify the light-control response and record the commissioned configuration.



Post-top mounting appearance. The order drawing defines the actual interface.

Replace the internal light-source assembly, not the housing

The serviceable item is the internal light-source assembly. Individual LED packages are not specified for field replacement. The external die-cast housing can be retained when a compatible replacement assembly is fitted.

Service item	What to check
Light-source replacement	Use the matched LED / optical / electrical assembly; restore seals and inspect the installation after service.
Battery / controller access	Isolate using the supplied instructions, support the components and retain the specified connection and enclosure arrangement.
PV and external equipment	Review shading, deposits, bracket condition and cable routing as part of the project maintenance plan.
Service record	Record the base model, optic, battery, controller programme and replaced components to keep documents aligned.

Use the supplied installation instructions

This page is a coordination overview, not a wiring or torque specification. Final fastening, polarity, isolation, cable protection and work-at-height arrangements follow the confirmed installation documents and site procedure.

Warranty: five years for the supplied system under agreed terms. Scope, installation conditions, service responsibility and any project-specific exclusions are confirmed with the order.

07 / ENGINEERING DOCUMENTS

Prepare a matched technical document pack.

The submission should identify the same luminaire, power, optics, battery, PV module and controller as the proposed supply. Model-specific photometric files shall reflect the confirmed finished-luminaire configuration.

The 200 lm/W finished-luminaire specification and up-to-230 lm/W LED-chip option do not replace applicable model-specific test evidence.

Document / evidence	Purpose and release condition
Luminaire and system datasheets	Separate optical / mechanical luminaire data from battery, PV and control selections.
IES / LDT photometric file	Requested for the confirmed power and optic; supplied separately after model / optic confirmation.
DIALux / Relux calculation	Prepared from the project geometry, target criteria and the matched photometric file.
Energy and reserve calculation	Document nightly energy, site solar resource, usable battery capacity and the low-sun recovery requirement.
GA / mounting / enclosure drawings	Confirm luminaire interface, PV bracket, battery-box position and cable route for the order.
Battery / PV / controller specifications	Match voltages, capacity, current limits, connectors, programme and any communications options.
Installation and maintenance instructions	Issued for the supplied hardware and system configuration.
CE / RoHS / applicable IEC-EN records	Applicable records reviewed against the selected model, component scope and destination requirements.
IP / IK and luminaire tests	Confirm the relevant enclosure / luminaire scope; the battery-box IP65 declaration does not cover all system parts.
LM-79 / LM-80 documentation	Luminaire performance records and LED-component life evidence are identified separately.
Battery transport documents	Applicable UN38.3 test summary and SDS / MSDS identified for the selected battery type and shipment.
Corrosion / salt-spray evidence	Available test scope reviewed on request; no salt-spray test duration is declared here.
BOQ matching / technical deviations	Prepared from the buyer's specification, available documents and confirmed supply scope.

Submit the BOQ and document deadline early

Available documents depend on the confirmed product configuration, project scope, tender requirements and submission stage. This datasheet is not evidence that every variant meets every listed standard or every road-lighting class.

The project submission identifies report references and applicable models/components. Matched photometric files, project calculations and formal drawings are released as separate controlled documents.

08 / PROJECT ENQUIRY

Order a system, not just a wattage.

HC means High Configuration. Select the base model first, then identify the energy, control, optical and mechanical options in the project schedule.

Base model	Mechanical / voltage platform
SL-SPL-HC-60	60 W small housing 12.8 V battery system.
SL-SPL-HC-80	80 W medium housing 25.6 V battery system.
SL-SPL-HC-100	100 W medium housing 25.6 V battery system.
SL-SPL-HC-120	120 W large housing 25.6 V battery system.

Project inputs required for configuration

Input group	What to provide
Location / environment	Country and city; shading; dust; corrosion exposure; temperature conditions.
Road / pole arrangement	Road width, pole height, spacing, overhang, aiming and existing pole information.
Lighting criteria	Target road class / lux, uniformity, CCT, optic preference and allowable late-night output.
Energy / autonomy	Night length, programme restrictions, reserve nights and minimum acceptable output during reserve operation.
Supply / documents	Quantity, PV and battery-box position, pole/foundation scope, communications, BOQ, drawings and submission dates.

Example system enquiry

SL-SPL-HC-100 | 6000 K | Type III | monocrystalline PV | pole-mounted battery box | Smart MPPT | Ø76 mm side-entry | dark grey.

Submit the installation city and operating profile to confirm battery capacity, PV size and reserve performance.

Delivery: schedule agreed against quantity, configuration, documentation and project milestones. Project configuration and branding options available.

Submit your project requirements

Send the installation location, road layout, operating profile and required documents. Sunlurio will review the configuration and identify the next technical submission.

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