Light shapes the city of tomorrow.

PUBLIC LIGHTING · SOLAR · CONNECTED

SMART CITY

WIRELESS MESH NETWORK

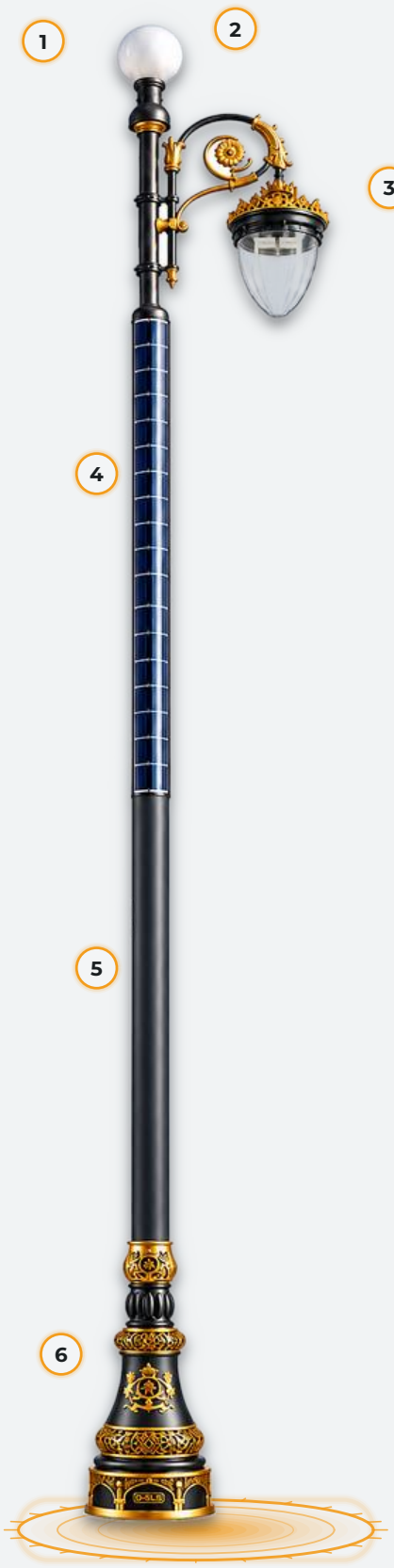
DATASHEET

2026

D-SLS solar streetlight · cylindrical photovoltaic shaft · MPPT-ATMANI-AI controller

D-SLS SOLAR STREETLIGHT · OVERVIEW

A complete, autonomous set: light, energy and intelligence integrated in a single column



1 Light finial — globe version
Addressable RGBW + amber · anti-theft signal to customer's choice

2 Gilded ornamental bracket
scroll bracket, gold finish — carries the lantern

3 D-SLS-23 crown lantern
20 – 150 W · 187 lm/W · indirect reflector ρ ≥ 98 % · ogival diffuser

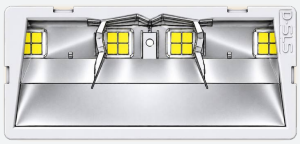
4 Cylindrical glass photovoltaic shaft
harvests light over 360° · no panel at pole top

5 Integrated MPPT-ATMANI-AI controller
MPPT · 16S storage · D4i + DT8 LED driver · TALQ 2.7.1

6 Royal skirt — ref. JUPROYEC
black & gold, royal emblem, zellige · registered design no. 30164

20 – 150 W LED power	**187 lm/W** lantern efficacy
360° solar harvesting	**3 nights** reference autonomy
0 connection · trenching	**TALQ 2.7.1** remote management

Indirect reflector (inter-reflection) — reflectance ≥ 98 %



Satin aluminium reflector optics, the LED is never seen directly: reflected, anti-glare light, no PMMA lens. Reflectance ≥ 98 %, ULOR 0 %, asymmetric road distribution. One-piece LED matrix, screw-removable.

OVERVIEW

ASSEMBLY CONTENTS · ONE REFERENCE, ONE FULL PRICE

Everything needed to operate the light point is included in the supply

1

D-SLS-23 crown lantern

20 – 150 W · LUSSO-5050AUX LED · 187 lm/W · D4i + DT8 driver · clear ogival diffuser.

2

Ornamental bracket

Scroll crook with rosette, gold finish — lantern fixed on pole top.

3

Globe light finial

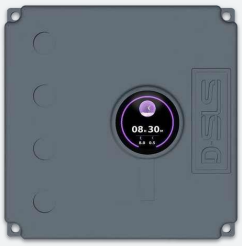
1 – 10 W addressable RGBW + amber · IP65 / IK10 · anti-theft signal of choice.

4

Photovoltaic shaft

Cylindrical glass panel integrated into the pole — 360° capture, no orientation needed.

5



MPPT-ATMANI-AI controller

MPPT · BMS 16S · 400 W LED driver · weather AI · AMOLED · TALQ 2.7.1.

6

Royal skirt JUPROYEC

Black & gold base — royal emblem, zellige · registered design no. 30164.

Included in the supply

- Integrated 16S storage — supercapacitors or lithium (LiFePO4)
- Internal wiring and plug-in connectors
- Factory settings: dimming profiles, reserve, DALI addresses
- Commissioning and operator training

Options

- LidarMesh CMS remote management (TALQ 2.7.1)
- LiDAR-ATMANI-AI node — dimming on detection
- Hybrid solar + grid mode or backup on power failure
- Colour, frieze and decoration defined on order

PHOTOVOLTAIC SHAFT · CYLINDRICAL GLASS PANEL

Energy harvested by the pole itself

360° capture

The cylindrical surface receives sun from morning to evening, whatever the street's orientation: no azimuth or tilt adjustment.

Integrated, discreet, protected

Cells under glass, integrated in the shaft: no panel on the pole top, less wind load and no target for vandalism.

Measured output

The controller traces the shaft's I-V curve: shading, soiling or degradation are detected and reported remotely.

ENERGY CHAIN

PV shaft (cylindrical glass) → MPPT (18 – 58 V · V2G) → 16S storage (supercap / LiFePO4) → LED driver (D4i + DT8) → Lantern (D-SLS-23)

All energy is managed by the MPPT-ATMANI-AI controller, housed in the assembly.

Reference sizing — 3 nights of autonomy

LED power	Lantern flux	PV peak power	Usable storage
20 W	3 740 lm	60 Wp	300 Wh
60 W	**11 220 lm**	**150 Wp**	**800 Wh**
100 W	18 700 lm	250 Wp	1 350 Wh
150 W	28 050 lm	400 Wp	2 000 Wh

Project-specific sizing

The photovoltaic shaft is sized to reach the required peak power; the controller's AI adapts the reserve each night to the weather forecast. Beyond the shaft's capacity, hybrid solar + grid mode takes over. Each project is subject to an irradiation study and a sizing note.

INTEGRATED CONTROLLER · MPPT-ATMANI-AI

A single device — from solar energy to cloud control

Autonomy display readable from the ground

18 – 58 V
PV input · bidirectional MPPT

16S BMS
supercap / lithium · active balancing

400 W
CW/WW LED driver · D4i + DT8

IP66
die-cast aluminium housing

Predictive AI

Reserve adapted to forecast rain and cloud: the lantern runs for several nights without sun.

Multi-chemistry storage

Supercapacitors for extreme climates (−40 °C) or lithium for long autonomy — same board.

Lantern control

Tunable white CW/WW 2700 – 6500 K, D4i + DT8 dimming, thermal derating, GPS astronomical calendar.

Field maintenance

AMOLED display, NFC without opening, USB-C, replaceable fuse — diagnostics at the pole base.

Safety & anti-theft

WireGuard VPN, signed OTA with rollback, GPS + accelerometer anti-theft with alarm.

Connected node

DALI-2 / D4i, Zhaga Book 18 receptacle, self-healing MESH, TALQ 2.7.1 remote management.

THE LIGHT · LANTERN, FINIAL & ROYAL SKIRT

Three handcrafted elements, one shared D-SLS technical core

D-SLS-23 crown lantern

Decorative LED lantern — gilded crown and frieze

Power	20 – 150 W
Efficacy	187 lm/W — up to 28 050 lm at 150 W
Source	LUSSO-5050AUX LEDs under flat tempered glass
Optics	Indirect reflector ρ ≥ 98 % · ogival bowl
Control	D4i + DT8 driver · tunable white
Mounting height	up to 10 m

20 – 150 W · 187 lm/W · D4i + DT8

Light finial — globe version

Pole crowning, light signal

Power	1 – 10 W
Source	Addressable RGBW + amber LED · DALI+
Diffuser	White opal globe Ø 150 mm, anthracite base
Protection	IP65 / IK10
Function	Anti-theft: light signal of the client's choice
Network	TALQ 2.7.1 · IPv6 mesh

RGBW + amber · IP65 / IK10 · Anti-theft

Royal skirt — ref. JUPROYEC

Your city's identity, lit up at night

Finish	Matt black & gold
Décor	Royal emblem (lions, crown, star), zellige, Andalusian arches
Customisation	Per project
Protection	Industrial design no. 30164 (Law 17/97), protected until 19/05/2030

Black & gold · Registered design

POWER SCENARIOS

The operating mode is configured — not wired

Stand-alone — off-grid

PV shaft + storage only: zero connection, zero trenching. Weather AI sizes the reserve for several sunless nights.

Hybrid solar + grid

Solar first, seamless grid back-up: the bill melts away, continuity is absolute.

Backup on power cut

The grid supplies power; at the slightest outage, storage takes over seamlessly — lighting remains a safety service.

REMOTE MANAGEMENT & DETECTION · OPTIONS

Every street light becomes a measuring and control point

LidarMesh CMS

Map of every light point, state of charge, solar yield, alarms and history — TALQ 2.7.1 interoperable.

LiDAR-ATMANI-AI node

Image-free detection of pedestrians, cyclists and vehicles: light rises on approach and saves energy the rest of the night.

MESH network

Each street light relays its neighbours; a single gateway serves a whole section.

Optimised cleaning

PV shaft soiling index reported by each point: cleaning rounds planned from the office.

Night profile

Typical scenario: 100 % at dusk, programmed dimming in the middle of the night, instant boost on LiDAR detection, back to 100 % before dawn — the energy reserve is preserved for sunless nights.

TECHNICAL SPECIFICATIONS

D-SLS-28 S 20-150 — DATASHEET

Assembly	Complete solar streetlight: lantern + bracket + finial + PV shaft + controller + storage + skirt
Lantern	Crown D-SLS-23 · 20 – 150 W · 187 lm/W · LUSSO-5050AUX LED · D4i + DT8 driver
Finial	Globe version Ø 150 mm · 1 – 10 W · addressable RGBW + amber · IP65 / IK10 · anti-theft signal
Energy	Cylindrical glass photovoltaic shaft · 360° capture · sized per project
Controller	MPPT-ATMANI-AI · PV input 18 – 58 V · bidirectional MPPT · 400 W LED driver · IP66
Storage	16S — supercapacitors or lithium (LiFePO4) · active-balancing BMS · SoC / SoH
Autonomy	3 reference nights · AI predictive reserve based on weather
Modes	Off-grid stand-alone · hybrid solar + grid · backup on outage
Connectivity	DALI-2 / D4i · Zhaga Book 18 · WiFi 6 · BLE · IPv6 · MESH · GPS
Remote management	TALQ 2.7.1 · LidarMesh CMS · WireGuard VPN · signed OTA
Maintenance	AMOLED display · NFC without opening · USB-C · I-V scan of the PV shaft
Socket	Royal skirt JUPROYEC · black & gold · registered design no. 30164
Finish	Colour, frieze and decoration defined at order

360° solar · MPPT · 16S · D4i + DT8 · TALQ 2.7.1 · IP66 · Anti-theft · Registered design

FEATURES

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D-SLS-28 S 20-150 datasheet · D-SLS solar lamp post · Rev. 10/2026 · Non-contractual document: D-SLS reserves the right to change specifications without notice.

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