

Datasheet

LEADSUN
Limitless Light. Beyond the Grid.

INTEGRATED SOLAR STREET LIGHT

AE1 All-in-One

All-in-one solar street lighting engineered for fast, high-volume deployment.

The Leadsun AE1 All-in-one integrates the solar module, battery, controller, and LED engine into a single compact housing, eliminating external wiring, separate panels, and complex mounting.

Built for fast, straightforward installation, it delivers reliable off-grid lighting for smaller-scale and high-volume projects where speed, simplicity, and repeatable rollout matter most.



Long-Life Battery

High-cycle LiFePO₄ battery



Bi-Facial Solar

Boosting energy generation by 10–15%



Premium LEDs

Precision optics with T3 distribution

3600 lm

LUMINOUS
FLUX

IP66

WEATHER
RATED

180lm/W

LED
EFFICACY

12-23ft

POLE
HEIGHTS

AE1 All-in-One

Integrated Solar Street Light

Why All-in-One

Every component, panel, battery, controller, and LED, lives in one sealed housing. There are no external panels to align, no battery boxes to mount, and no inter-unit wiring to run. A crew mounts the unit to a standard 2 3/8" tenon, sets orientation, and moves to the next pole.

That single-housing approach is what makes the AE1 ideal for high-volume rollouts: predictable install times, fewer parts to track, and far less that can be specified wrong or damaged in the field. PIR adaptive output and high-cycle LiFePO₄ storage handle the performance side, so the unit runs dawn-to-dawn without grid power or maintenance trips.

STEP 1 · INTEGRATE

All-in-one Housing

Panel, battery, controller, and LED in a single sealed unit.

STEP 2 · DEPLOY

Fast Pole Mount

Fits standard 2 3/8" tenons; predictable install times across high-volume rollouts.

STEP 3 · ILLUMINATE

Adaptive All Night

PIR output and LiFePO₄ storage deliver dawn-to-dawn light with no grid.

Core Advantages

- **Single-Housing Design:** Solar, battery, controller, and LED in one unit for the fastest possible install.
- **Built to Last Outdoors:** IP66 waterproof and municipality-grade corrosion-resistant materials.
- **Adaptive Efficiency:** PIR motion sensing and bi-facial solar maximize runtime and reduce wasted output.
- **Scalable Configuration:** Supports 60–100W solar and 10–40W LED engines across 12–26 ft pole heights.

Specifications

MECHANICAL

Model Number	X4DN20
Net Weight	29 lbs
Dimensions	40 × 17 × 5 in
IP Rating	IP66

ELECTRICAL / SOLAR + BATTERY

PV Module Power	60 W
Lithium Battery Capacity	308 Wh

MOUNTING

Top of Pole / Tenon OD	Fits standard 2 3/8"
Installation Height	12–23ft
Installation Distance	50–90 ft

LIGHTING

Light Output	20 W
Typical Luminous Flux	3440 lm (IES tested)
LED Efficacy	Up to 180 lm/W
Color Temperature	3000 / 4000 / 5000 K
Optical Distribution	Type II / Type III
BUG Rating	B1-U0-G1
Sensor Options	PIR Motion Sensor

Applications: Rapid rollouts, residential streets, pathways, parks, campuses, and remote sites.

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