E-AblePower Technology

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E-ABLE POWER / SOLAR LIGHTING / ORBITRAY

OrbitRay

Smart all-in-one solar street light · LKAS series · 30–150 W · 7 models · IoT ready

OrbitRay is the connected branch of the E-ABLE POWER all-in-one range, built on the LKAS platform. Seven models from 30 W to 150 W share one die-cast housing family, one MPPT controller with radar sensing, and an IoT-ready port for remote monitoring and parameter writing.

The series is specified where lighting has to be measured and managed: industrial parks, municipal roads, car parks and site perimeters. At 220 lm/W a smaller panel and battery deliver the same illuminance as a 200 lm/W fixture.



7	33,000	220	IK08
models, 30–150 W	lm at 150 W	lm/W module efficacy	impact rating, IP65

KEY FEATURES

01

220 lm/W module — 6,600 to 33,000 lm; 30 W to 150 W in seven steps.

Radar sensing — 15 m detection range, 15° to 30° sensing window, three operating modes A / B / C.

Die-cast body — AL6063 profile with ADC12 casting and 1060 aluminium; IP65 and IK08.

IoT-ready control — Remote monitoring, remote control and parameter writing on the same controller.

LiFePO4 and MPPT — 240 to 1,152 Wh, 4–6 h charge, 2–3 overcast days.

Two clamp sizes — Ø60 / 76 mm pole adaptor, 813 mm to 1,688 mm luminaire length.

MODEL RANGE

Model	Rated power	Luminous flux	Installation height
LKAS-30W	30 W	6,600 lm	5–6 m
LKAS-40W	40 W	8,800 lm	6–8 m
LKAS-60W	60 W	13,200 lm	8–10 m
LKAS-80W	80 W	17,600 lm	10–12 m
LKAS-100W	100 W	22,000 lm	12–13 m
LKAS-120W	120 W	26,400 lm	12–14 m
LKAS-150W	150 W	33,000 lm	14–16 m

Seven power steps on one platform; clamp and controller family are shared across the series.

IN THIS DATASHEET

02 Technical data p. 2
03 Dimensions & lighting p. 3
04 Installation & commissioning p. 4

Typical applications — Industrial parks · municipal roads · car parks · site perimeters · logistics yards · smart-city corridors

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TECHNICAL DATA

02

Values are reproduced from the factory data sheet; options are confirmed on the order.

Model	30W	40W	60W	80W	100W	120W	150W
Rated power	30 W	40 W	60 W	80 W	100 W	120 W	150 W
Solar panel	18 V / 55 W	18 V / 67 W	18 V / 85 W	18 V / 100 W	18 V / 120 W	18 V / 150 W	18 V / 180 W
Battery	3.2 V / 75 Ah	3.2 V / 105 Ah	12.8 V / 45 Ah	12.8 V / 60 Ah	12.8 V / 75 Ah	12.8 V / 90 Ah	On request
Battery energy	240 Wh	336 Wh	576 Wh	768 Wh	960 Wh	1,152 Wh	On request
Luminous flux	6,600 lm	8,800 lm	13,200 lm	17,600 lm	22,000 lm	26,400 lm	33,000 lm
Net weight	10.3 kg	11.6 kg	13.4 kg	15.8 kg	18.6 kg	21.8 kg	28.0 kg
Product size	813 × 400 × 70 mm	935 × 400 × 70 mm	1,143 × 400 × 70 mm	1,163 × 465 × 70 mm	1,380 × 465 × 70 mm	1,688 × 465 × 70 mm	1,585 × 585 × 70 mm
Installation height	5–6 m	6–8 m	8–10 m	10–12 m	12–13 m	12–14 m	14–16 m

SERIES DATA, COMMON TO ALL MODELS

Luminous efficacy	**220 lm/W (all models)**
Controller	**MPPT + intelligent light control + time control + radar sensing**
Charging time	**4–6 h**
Discharge profile	**2–3 rainy days; three preset modes A / B / C**
Beam angle	**T2 / T2M**
Colour temperature	**2700–6500 K**
Housing material	**AL6063 + ADC12 + 1060 aluminium**
Ingress protection	**IP65, impact IK08**
Certification basis	**FCC, IEC 60598, IEC 62722, IEC 62471, LM-79, LM-80 (factory declaration)**
Warranty	**3 years, manufacturer standard**

- Values are reproduced from the LKAS series factory specification.
- The 150 W battery and energy figures are not stated in the source; they are confirmed with the factory on the order.
- IoT monitoring is an option: gateway and platform are quoted per project.
- Radar window 15° / 20° / 25° / 30° is a factory option; sensing range 15 m.

CONTROL MODES

Mode A	**6 h 100/30 · 4 h 80/20 · 2 h 100/30**
Mode B	**1 h 80 · 2 h 100 · 1 h 70 · 8 h 30**
Mode C	**1 h 80/80 · 3 h 100/100 · 2 h 70/30 · 4 h 50/10 · 2 h 70/20**

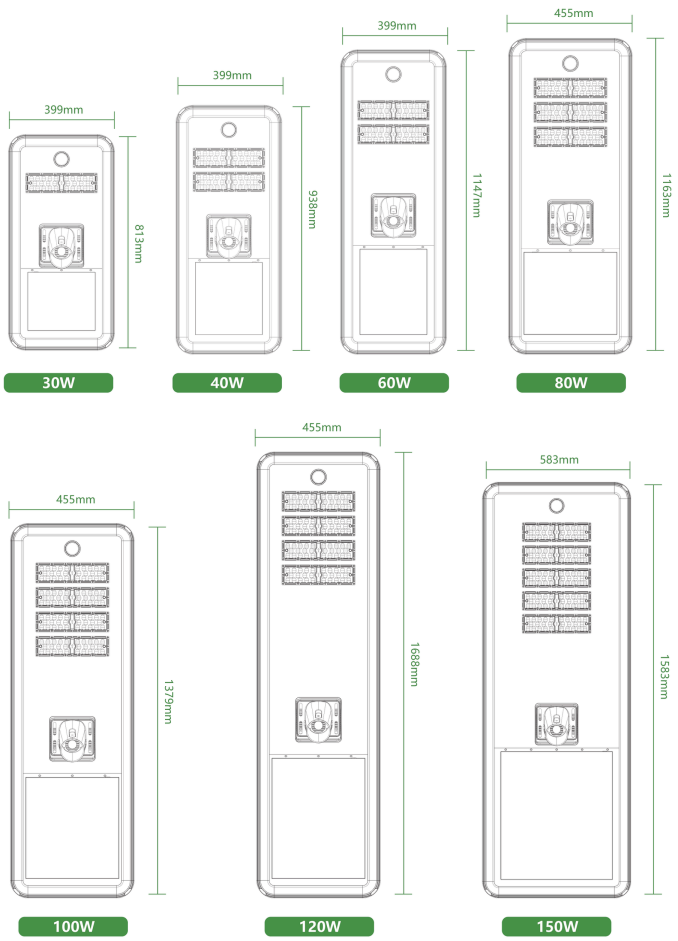
Two figures per period: output with motion detection / output without motion. Single figures are fixed output.

WHAT TO FIX WHEN SPECIFYING

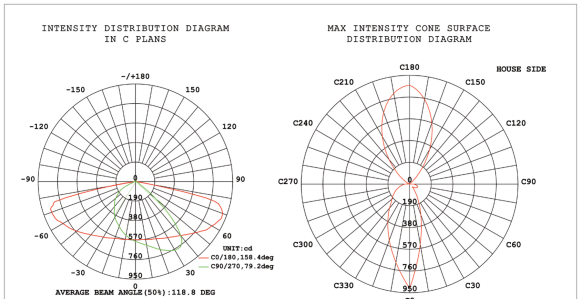
- Mounting height from the table: it sets the pole class, the arm and the spacing.
- Pole diameter at the clamp: Ø80–92 mm for SunMyth, Ø60 / 76 mm adaptor for OrbitRay.
- Nightly hours and overcast days to be covered; both set the battery energy for the site.

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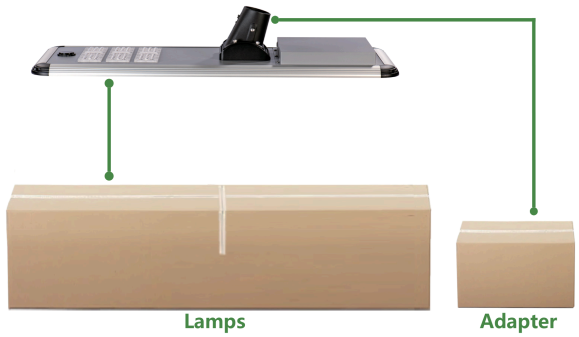
DIMENSIONS & LIGHTING



Dimension drawing — Top view of all seven models: 813 mm (30 W) to 1,688 mm (120 W); body width 400, 465 or 585 mm.



Photometry: C-plane intensity distribution and isocandela surface; average beam 118.8°, C0 peak 158.4 cd/klm.



Packing: luminaire and pole adaptor are packed separately, one carton each.

KEY MOUNTING DATA

Ø60 / 76 mm
Pole clamp

T2 / T2M
Beam angle

2700–6500 K
Colour temperature

COMPLIANCE AND PHOTOMETRY

RoHS and CE. The factory declares FCC, IEC 60598, IEC 62722, IEC 62471, LM-79, LM-80 and IK08; test report numbers are issued with the order documents.

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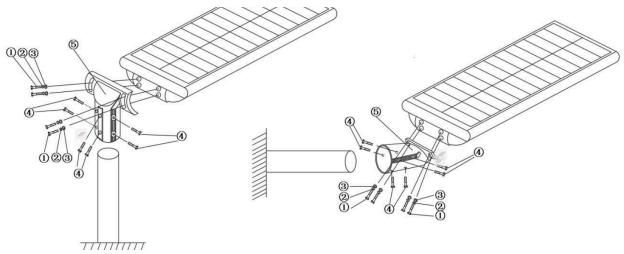
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INSTALLATION & COMMISSIONING

04

MOUNTING SEQUENCE

1. Switch on the waterproof switch inside the luminaire before lifting it to the pole.
2. Offer the luminaire to the pole, engage the clamp, and fit the M8 × 25 socket bolts with spring washer and gasket.
3. Set the panel tilt between 0° and 15° for the site latitude, then tighten evenly so the gasket is compressed without distortion.
4. Check that the panel sees the sun path without shade from buildings, trees or the pole itself for the whole day.
5. Leave the luminaire on charge for the first day; do not force discharge on the first night after installation.



Factory mounting diagram: top mount and side-entry pole.

SITE RULES

- Install on a dry day: a luminaire installed in rain cannot recover charge before its first night.
- The pole and its foundation are by others; the pole must be plumb and rated for the luminaire plus wind load.
- Do not open the sealed housing on site: battery and controller are factory-sealed, service follows the factory procedure.
- Storage over 6 months: recharge in sunlight or through the charging port before installation.

COMMISSIONING CHECKLIST

- Waterproof switch is on and the connector is fully seated.
- Clamp bolts tight, gasket compressed evenly, luminaire cannot rotate by hand.
- Panel free of shade at 09:00, 12:00 and 15:00 on the day of installation.
- Battery voltage above the controller cut-in level before the first night.
- Night test: light on at dusk, full output on approach, dimming after 15 s.
- Model, serial number and commissioning date recorded for the warranty file.

MAINTENANCE / PACKING LIST

- Clean the panel twice a year, or monthly in dusty or coastal sites.
- Inspect the clamp and the gasket at the same time; replace a hardened gasket.
- Check the lens and the sensor window for dust, salt and insect nests.
- Battery capacity is verified by the night test; a shortened night indicates end of battery life.
- Luminaire with integrated panel, battery and controller — 1 pc
- Pole adaptor or clamp set for the ordered diameter — 1 set
- M8 × 25 socket bolts, spring washers and gaskets — 1 set
- Remote control and instruction sheet (handover to the operator)

ORDERING AND SCOPE

Order by model code, for example GH-80W or LKAS-120W. State the pole diameter, the mounting height and, for OrbitRay, whether IoT monitoring is required. Poles, brackets and adaptors are quoted separately.

RoHS and CE. The factory declares FCC, IEC 60598, IEC 62722, IEC 62471, LM-79, LM-80 and IK08; test report numbers are issued with the order documents.

Specifications are nominal and may change without notice. The contractual revision is the one confirmed in the order acknowledgement. Installation is summarised here; the full procedure is issued as a separate manual. Draft R02 for internal review.