E-AblePower Technology

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SOLARWRAP / SYSTEM SOLUTIONS

Build the whole pole not just the panel.

Vertical modules, poles, LED heads, batteries and MPPT control as one set — sized, paired and quoted together.

A vertical array is only half a product. The value comes from the set: how many modules the head needs, where the battery lives, and which controller ties them together. This sheet sets out the three ways we build a pole and the lamp-head sets that are already configured and priced.

Vertical module	Q140 / Q200 · S80 / S100 / S140 · SQ140 / SQ220 / SQ260
Lamp head	HELIOS T3–T5 · HERMES T6–T8 · THOR T10–T12
Battery	LiFePO4 cylinder K1260 / K1290 / K2460 / K2490
Controller	MPPT, 97% efficiency, dimming profile per site
Pole	Galvanized steel, straight or tapered, clamp height to drawing



Modules, head and battery on one pole

WHAT A SET IS QUOTED FROM

Array	Module count and format fixed by the head and the pole diameter
Battery	Wh sized on the load, the autonomy nights and the worst month
Controller	Current rating from the array, voltage from the pack
Documents	Datasheet, installation manual, wind-test report

4	19	6	3
MODULE FORMATS	SKUS IN RANGE	LAMP HEADS	BUILD SCENARIOS

MOUNTING HEIGHT SETS THE SET

Road class	Height	Head	Modules	Battery	Typical use
Footpath, cycleway	3–4 m	HELIOS T3 · 30 W	Q200 ×1	307 Wh	Parks, campuses, residential alleys
Residential street	5–6 m	HELIOS T5 · 50 W	Q140 ×2	460 Wh	Village roads, estate roads
Boulevard	7–8 m	HERMES T6 · 60 W	Q200 ×2	538 Wh	Collector roads, plazas
Arterial road	9–10 m	HERMES T8 · 80 W	Q200 ×2	768 Wh	Trunk roads, ring roads
Highway	11–12 m	THOR T12 · 120 W	Q200 ×4	1,075 Wh	Interchanges, freight corridors

Typical pairings; every project is re-checked against the road class, the local winter sun and the required autonomy.

THREE WAYS TO BUILD A POLE

SCENARIO 01
All-in-one light head
Vertical module on the pole, solar LED head with battery and controller built in. Fewest parts, fastest install, nothing to bury.

SCENARIO 02
Battery inside the pole
Standard LED head plus a LiFePO4 cylinder dropped into the pole below the modules. Battery is protected from theft, sun and frost.

SCENARIO 03
Buried battery pack
Standard head with the pack in a buried vault at the pole base. Room for a large bank where the load is heavy and the pole is slim.

Scenario B is the default for street lighting: the pole protects the battery and the head stays a standard item. Scenario C is used where the daily load is above roughly 1 kWh and the pole cannot take a large cylinder.

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CONFIGURED SETS

Popular vertical solar street light sets

Lamp head	Lighting	Flux	Solar module	LiFePO4 battery	CCT	Beam	Controller	Head size (mm)	Warranty
HELIOS T3	30 W	5,100 lm	Q200 × 1	307 Wh 12.8 V	3000–6000 K	Type I / II / III	97% MPPT	610 × 265 × 97	3 yr
HELIOS T5	50 W	8,500 lm	Q140 × 2	460 Wh 12.8 V	3000–6000 K	Type I / II / III	97% MPPT	610 × 265 × 97	3 yr
HERMES T6	60 W	10,200 lm	Q200 × 2	538 Wh 12.8 V	3000–6000 K	Type I / II / III	97% MPPT	678 × 278 × 102	3 yr
HERMES T8	80 W	13,600 lm	Q200 × 2	768 Wh 25.6 V	3000–6000 K	Type I / II / III	97% MPPT	678 × 278 × 102	3 yr
THOR T10	100 W	16,800 lm	Q140 × 4	921 Wh 25.6 V	3000–6000 K	Type I / II / III	97% MPPT	792 × 310 × 116	3 yr
THOR T12	120 W	20,400 lm	Q200 × 4	1,075 Wh 25.6 V	3000–6000 K	Type I / II / III	97% MPPT	792 × 310 × 116	3 yr

Module counts refer to the 200 W and 140 W hexagon modules; the same array voltage can be reached with circular or square modules.

HOW TO SIZE A POLE

1. Pick the head	Road class and mounting height fix the wattage; 30–50 W for lanes, 60–120 W for arterial roads.
2. Read the module count	The set table already pairs each head with an array; do not shrink it without re-running the yield estimate.
3. Check the pole diameter	Each module has a maximum pole diameter — 150 mm for Q140/Q200, 120 mm for SQ, 120–170 mm for the S range.
4. Fix the array voltage	Modules in series add voltage, in parallel add current: two 18 V modules give 36 V, four give 72 V. Stay inside the controller window.

TWO OPTIONS THAT DECIDE THE TENDER

OPTION 1
Hybrid AC backup 85–240 V
The controller falls back to mains when the pack runs low and returns to solar once it recovers. For corridors with a bad winter or a grid connection already at the pole.

OPTION 2
IoT / LoRa monitoring
Each light reports status, battery health and generation; remote switching, adaptive dimming and fault alarms. LoRa gateway or direct link, no monthly fee from us.

TO TURN THIS INTO A QUOTATION

Site and latitude	City plus coordinates; the yield table is latitude-dependent
Road class and height	Fixes the head wattage and the photometric class
Autonomy	Nights without sun the pack must cover
Pole	Supplied by us or existing; diameter and wall thickness
Battery location	Scenario 01, 02 or 03
Handover documents	DIALux report, test reports, drawing set

Not on this sheet	Packing data and container loading — on request
	CE / EMC / RoHS file for the module — not held
	DIALux calculation — quoted as a service
	Freight and duties — EXW Zhuhai, quoted separately
	Structural approval of the pole at the site wind speed

ASKED AT TENDER STAGE

Can we keep our own pole?	Yes. Modules clamp to any round pole of 70–330 mm depending on the family; square poles take the SQ range.
Do we need a new foundation?	No for a retrofit: the module adds roughly the weight of one panel section to the pole head, and the clamp replaces the existing bracket.
Which controller?	MPPT at 97% efficiency; a PWM unit works but gives up a noticeable share of the array.

Can the battery be added later?	Yes on scenario B and C: the cylinder and the vault are sized for the final load, not just the first stage.
What if the pole is tapered?	Give us the diameter at the clamp height, not at the base; the module is straight-sided.
Is there a CE certificate?	Not for the module. What exists is a wind-load test to IEC 60598-2-3; we do not claim CE, EMC or RoHS for the module.

Notes. 1) Set data is the factory configuration; changing the head, the module format or the battery capacity makes it a custom set and it must be re-quoted. 2) Rated module power is at STC; real daily energy depends on latitude, shading and the dimming profile. 3) No CE / EMC certificate is claimed for the module; the wind-load test report is IEC 60598-2-3.