

51.2V 150Ah Battery System

LITHIUM IRON PHOSPHATE / CPLFP-512150-01

51.2V

NOMINAL VOLTAGE

150Ah

NOMINAL CAPACITY

7.68kWh

NOMINAL ENERGY

200A

CONTINUOUS DISCHARGE

01 / BATTERY ARCHITECTURE

Chemistry / cells	LiFePO4 / 16S1P prismatic
Cell model	EVE LF150 / part 91022885
Cell manufacturer	Hubei EVE Power Co., Ltd.
Cell grade	New Grade-A production
Pack acceptance	≥149Ah under factory test
Production control	Serialized packs; cell-lot traceability; controlled BOM
Discharge temp.	-20 to 65°C (-4 to 149°F)

02 / ENVIRONMENT & BUILD

Battery enclosure	IPX6 water only; no dust rating
Dimensions*	19.84 × 12.99 × 10.63 in.
Weight*	Approx. 130-132 lb.
Terminals	M8-200A
Busbars	Tin-plated pure copper
Pressure vent	Minshu MS-BXG-T006; 304 stainless / ePTFE
BMS coating	Conformal-coated PCB

03 / DISCHARGE OPERATING ENVELOPE

200A

CONTINUOUS

230A

30 MINUTES

260A

10 MINUTES

280A

1 MINUTE

300A

30 SECONDS

Protection only: 452A / 10 sec is the BMS overcurrent threshold, not usable peak output.

04 / CHARGING

Supplied charger	25A / 58.4V charge cutoff
Normal charging	0 to 50°C (32 to 122°F)
Maximum charge	100A at 25 to 45°C (77 to 113°F); subject to SOC/BMS limits

05 / REGENERATIVE BRAKING

Defined limit	200A max / 1 sec
Other durations	No continuous or 10-sec rating
Navitas status	Vehicle calibration and regen validation pending

No charging or regenerative charging below 0°C actual cell temperature.

Heating: 205W supplier option; subject to Bimini approval and validation. Not standard equipment.

* Approximate dimensions and weight; confirm the final production drawing.

Manufacturer-defined current ratings; subject to SOC, voltage, temperature and BMS operating limits.

Components & Warranty

CPLFP-512150-01 / Battery management, accessories and support

06 / BATTERY MANAGEMENT		07 / COMMUNICATION & PROTECTION	
BMS model	JY25-SW16-022-A-A01-F16ST	Communication	CAN 250 kbps RS485 9600 bps / Bluetooth
Hardware / FW	A1.0 / V1.5	Monitoring	Cell/pack voltage, current, SOC, temperature, cycles, faults
MOSFET	Shanghai Belling BLP02N08-T / 85V	Protection	Voltage, current, short-circuit and thermal protection
Balancing	30mA passive	Diagnostics	Bluetooth included; Bimini branded app in development
Balance trigger	Approx. 3.35V / 30mV delta		
08 / SUPPLIED CHARGER		09 / DIGITAL BATTERY GAUGE	
Manufacturer	Weihai Tianli	Manufacturer	InnoMicro
Model	1200CG4825L	Model	DP-07L
Input / output	100-240VAC 58.4V DC / 25A	Operating voltage	9.5-95V DC
Communication	CAN	Communication	BMS Serial Protocol_A5
Rating / warranty	IP65 / 2 years	Rating / warranty	IP65 / 1 year
UL status	Manufacturer states UL 1564*	Harness / plugs	4-core, approx. 4m; GX16 / M12
10 / BATTERY LIFE & WARRANTY			
YEARS 1-5		YEARS 6-10	
Full replacement		50% of MSRP	
Replacement battery at no charge for approved warranty claims.		Replacement battery pricing for approved warranty claims.	
		CAPACITY THRESHOLD	
		80% SOH	
		Of original rated capacity; battery warranty threshold.	

Pack cycle life: ≥1,500 cycles at 80% DOD to 80% initial capacity.**

Warranty start: Retail delivery; Bimini/dealer inventory time excluded.

* Charger UL documentation pending. IP65 applies to the charger and gauge, not the battery.
** Manufacturer-warranted pack specification; not completed independent full-duration cycle validation.
Warranty coverage, freight, labor, RMA and service-response terms follow the final warranty agreement.

Battery Kit & Dealer Support

CPLFP-512150-01 / Complete package configuration

11 / INCLUDED IN THE BATTERY KIT	
Battery pack	51.2V 150Ah CPLFP-512150-01, integrated BMS and Bluetooth
25A charger	Weihai Tianli 1200CG4825L; 58.4V DC; U.S.-standard AC plug
Digital battery gauge	InnoMicro DP-07L; illuminated battery display
Gauge / communication harness	4-core cable, approximately 4m; mating connections
Charging connection	Charging connector and vehicle receptacle
Switch / outlet cable	Cable assembly for the supplied battery package
Mounting brackets	Universal mounting brackets
Mounting hardware	Required battery/gauge mounting hardware for the approved kit

Kit contents follow the approved package BOM; final accessory part numbers, quantities and vehicle-specific fitment must be confirmed for the ordered configuration.

12 / PRODUCTION QUALITY		13 / DEALER DIAGNOSTICS	
Traceability	Serial number, production date, cell lot, BMS hardware/firmware, BOM, QC and EOL records	Diagnostic access	Bluetooth, CAN and RS485; battery condition and fault information
Factory checks	Capacity, cell voltage/delta, communications, sensors, charger, gauge, torque, sealing	Service focus	Battery, BMS, charger, gauge and harness diagnostics; approved replacement parts
Change control	Critical component, firmware and process changes require prior written Bimini approval	Parameter control	Protected BMS settings require authorized access; no ordinary customer parameter changes
Production release	Golden Sample approval and controlled pilot validation required before mass production	Branded app	iOS/Android app planned: registration, warranty support, diagnostics and controlled OTA

Vehicle integration: The intended Bimini architecture pairs the battery with a Navitas TAC2 controller and 6.3kW AC motor. Vehicle-level validation remains pending. The controller, motor and DC/DC converter are vehicle systems, not listed battery-kit contents.

Battery manufacturer: Suzhou Clouds Power Tech Co., Ltd. / Specification owner: Bimini LEV