



olenergies

# OlenBox series



ULTRA COMPACT



LIGHT WEIGHT



DESIGNED TO ENDURE



NO MAINTENANCE



USABLE IN ALL DIRECTIONS

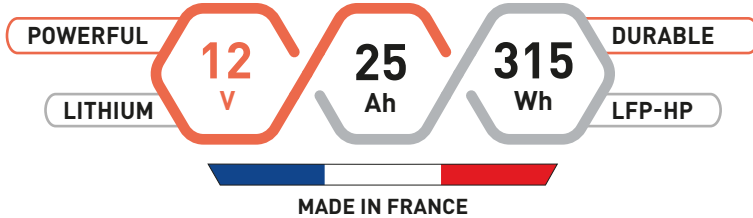


UNLIMITED ASSEMBLY

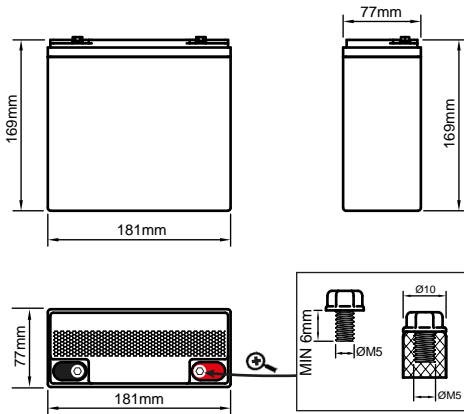
WARRANTY 5 YEARS

## TECHNICAL SHEET

THE POWERFUL BATTERY MADE TO LAST



### DIMENSIONS



### SPECIFICATIONS

Electrical		Mechanical	
Rated voltage	13.0 V	Casing material	ABS
Rated capacity	24.0 Ah	Dimensions (W*D*H)	181*77*169 mm
Energy	312 Wh	Weight	<b>2.70 kg</b>
Internal resistance	< 35.0 mΩ	Terminals	M5
Monthly self discharge	< 3 %	Ingress protection code	IP65
Charge		Discharge	
Charge efficiency	> 98 % @0.2C	Discharge efficiency	> 96% @0.5C
Charge voltage	14.5 ± 0.1 V	Continuous current	<b>25 A</b>
Charge mode	CC/CV	Maximum current 10 sec.	<b>75 A</b>
Rated charge current	15.0 A	Discharge cut-off voltage	10.0 V
Charge cut-off current	0.05C	Configurable thresholds	No
Lead-acid chargers	Compatible	Exceeding values	No
Temperature		Quality	
Charge temperature	0°C   +50°C	Certifications	CE, RoHS, UN38.3
Discharge temperature	-20°C   +65°C	Warranty	5 years
Storage temperature	+15°C   +35°C	Manufacturing country	France

### MADE IN FRANCE INNOVATION

- ✓ High Performance Lithium LFP Technology
- ✓ Reliable energy source
- ✓ 60% lighter than a lead acid battery
- ✓ Designed to last 20 years
- ✓ Fast charge
- ✓ Built-in safety mechanisms
- ✓ From 4,000 to 12,000 cycles (refer to curves)
- ✓ Compatible with MERLIN Smartshunt!

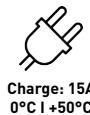
### APPLICATIONS

- Lighting & Instrumentation**  
Test & Measurement, Camera, Lighting, Energy case, Weather station, Pumping...
- Marine, mobility and robotics**  
Boats, Recreational vehicles, Robots, Construction, Forklifts...
- Critical power supply**  
UPS, Datacenter, Medical infrastructures...
- Solar storage**  
Self-consumption, Renewable energies, Vehicle to grid, Grid services...

Cluster your batteries, add a screen and join the MERLIN IoT ecosystem!



Accessories sold separately



# CURVES PROFILES



**SAFE**  
**DURABLE**  
**POWERFUL**

- ✓ 4,000 cycles @80% DoD @80% SoH
- ✓ 8,000 cycles @70% DoD @70% SoH
- ✓ 12,000 cycles @60% DoD @80% SoH



## Longest service life on the market

Our systems are designed to last up to 20 years providing the lowest Total Cost of Ownership (TCO).



## Eco-friendly

Circular Economy product.  
Recyclable battery containing neither lead nor cobalt.



## 100% secure

LFP-HP chemistry is intrinsically safe and the BMS protect the battery. No risk of fire or deflagration.



## Replaces 2 lead-acid batteries

Olenergies LFP-HP batteries can be discharged at 100% of useful capacity (lead-acid = 50%) !



## Charge efficiency close to 100%

There is no need to follow a sequential curve.  
Charging efficiency is close to 100%.

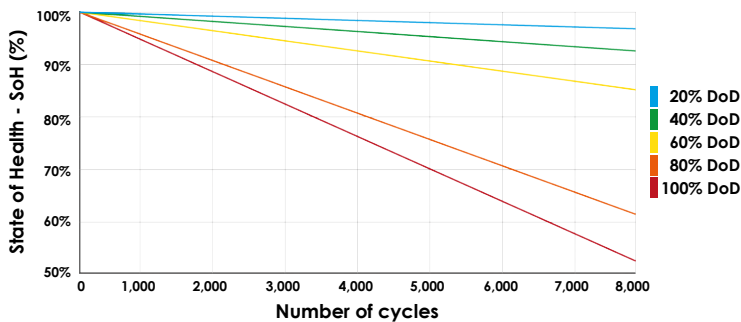


## Equal voltage throughout the discharge

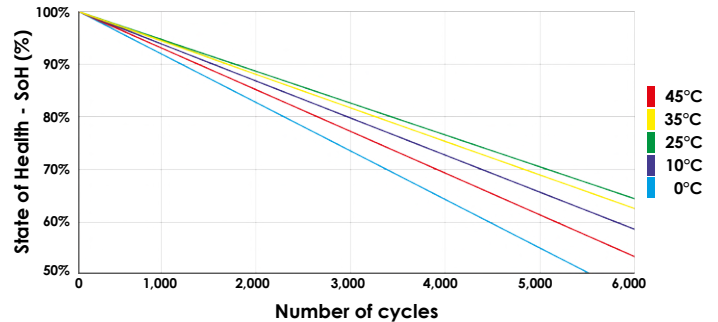
Unlike a lead-acid battery, our technology provide the same voltage levels throughout the discharge process.

## LIFETIME CURVES

State of Health (SoH) related to the number of cycles for different Depths of Discharge (DoD) @1C and 25°C

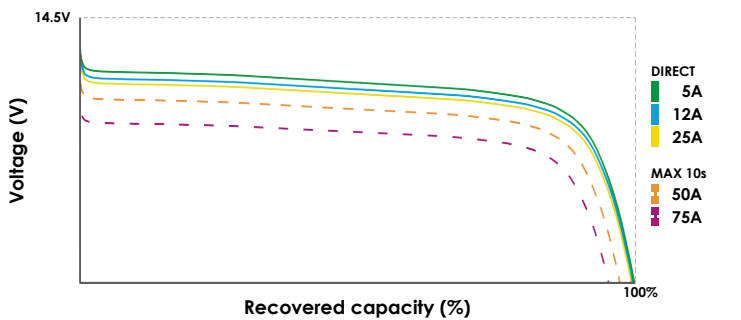


State of Health (SoH) related to the number of cycles for different temperatures @1C and 100% DoD

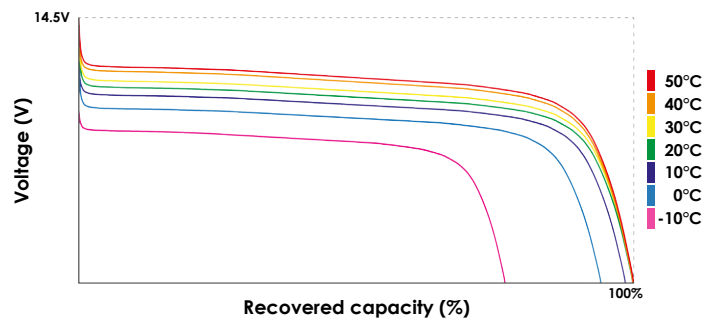


## DISCHARGE CURVES

Voltage curves @25°C for various discharge currents

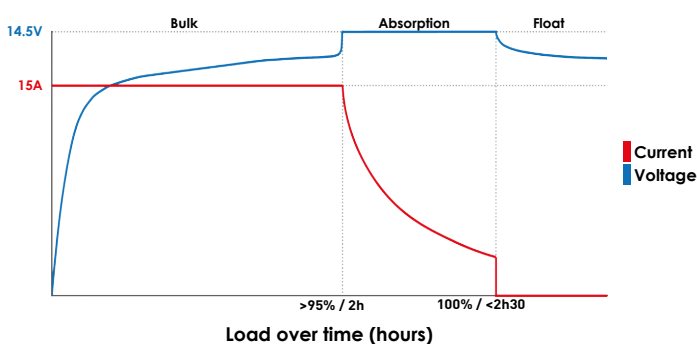


Voltage curves @C/5 for various temperatures



## CHARGE CURVE

Constant Current/ Constant Voltage (CC/CV) recommended charge



## SELF-DISCHARGE CURVE

Self-discharge according to time and storage temperature

