



LFP4850LCD

Lithium Iron Phosphate LiFePO₄ Battery



Extended Cycle Life

3500 cycles @ 100% DOD - Cost-effective investment.



Long Life

Its stable chemistry ensures maintenance-free operation and enhanced safety, while extending overall lifespan.



Complete Built-in Protection

Intelligent Battery Management System (BMS) with safeguards against overcharge, over-discharge, overcurrent, and other fault conditions.



3 Year Warranty



Fast Charging

Saves time and boosts productivity by minimizing recharge downtime.



Extreme Heat Tolerance

Exceptional high-temperature performance with minimal capacity degradation.



Ultra-lightweight + High Energy

OSONIX Lithium delivers higher Wh/kg energy density while weighing just 1/3 of equivalent SLA (Sealed Lead-Acid) batteries.



Superior Energy Retention

Up to >12 month energy retention, extremely low self-discharge rate (>3% per month) zero sulfation risk (non-lead chemistry).



Anti-Theft Protection System

BMS lockout mode: Immediately cuts power supply and activates audible alarm upon tampering detection.

PHYSICAL SPECIFICATIONS

Dimensions	Width	17.4 in (442 mm)
	Deep	17.4 in (442 mm)
	Height	5.19 in (132 mm)
Rack units		3U
Weight		59.52 lb (27 kg)
Terminal		M6
Container Mat.		Oven-Cured Stainless Steel
IP protection		IP30

FUNCTIONS

LCD Screen	Real-Time Battery Module (& Cell) Status
Communication ports	RS232, RS485
LED status indicator	RUN / ALM / SOC%
Parallel communication	Máx. 15 units
BMS (Alarm & Protection)	Against overcurrent, short circuit, overvoltage, overtemperature, low temperature.
External protection / disconnection	Thermal-Magnetic Circuit Breaker

CONDITION OF USE (ENVIRONMENT)

Temperature	Charge	32°F - 122°F (0°C - 50°C)
	Discharge	-4°F - 140°F (-20°C - 60°C)
	Storage	-4°F - 140°F (-20°C - 60°C)
Altitude (without derating)		≤ 2000m
Humidity		≤ 95%
Cooling System		Using heat sinks

APPLICATIONS



Telecom



UPS



Renewable Energy



Emergency Lighting

TECHNICAL SPECIFICATIONS

Nominal Voltage		48V
Nominal Capacity		50Ah
Nominal Energy Capacity		2400Wh
Voltage Range		37.5 - 54.7V
Charging Voltage	Floatation	51 - 51.7V
	Equalization	52.5 - 54V
Charging current		10A
Max. Continuous Charging current		50A
Discharge current		10A
Max. Continuous discharge current		50A
Cycles (25°C, 100% DOD)		3500 Cycles
Final voltage		40.5V
Energy charging efficiency (0.2C @ 25°C)		≥95%
Initial resistance (25 °C, 50% SOC)		≤20mΩ
Self-discharge		≤3%
Useful life		≥15 years

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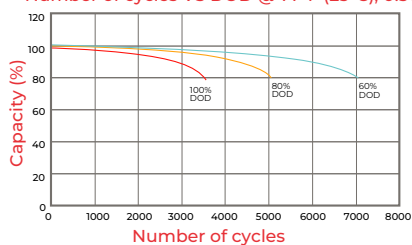
CONSTANT CURRENT DISCHARGE (AMPERES) AT 77°F (25°C)

Final voltage/Time	1 h	2 h	3 h	5 h	8h	10h	15h	20h
40.5	47.5	24	16.6	10	6.25	5	3.33	2.5

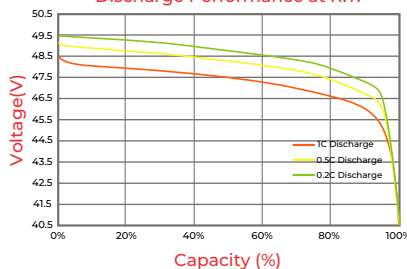
CONSTANT POWER DISCHARGE (WATT/CELL) AT 77°F (25°C)

Final voltage/Time	1 h	2 h	3 h	5 h	8h	10h	15h	20h
40.5	2280	1152	800	480	300	240	160	120

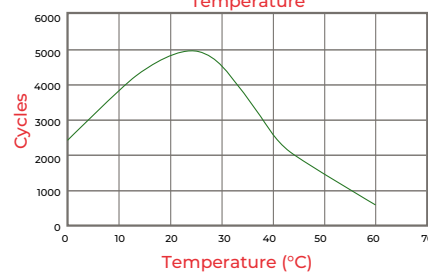
Number of cycles VS DOD @ 77°F (25°C), 0.5C



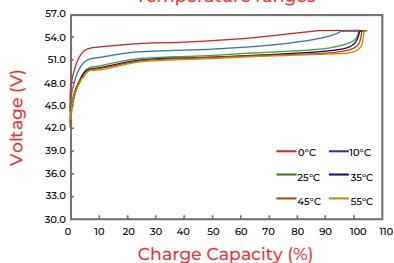
Discharge Performance at R.T.



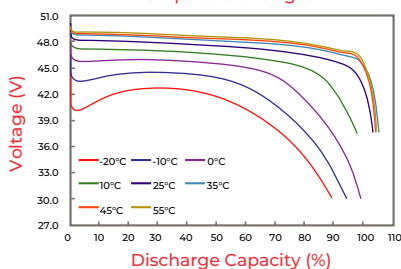
Cycle Life in Relation to Temperature



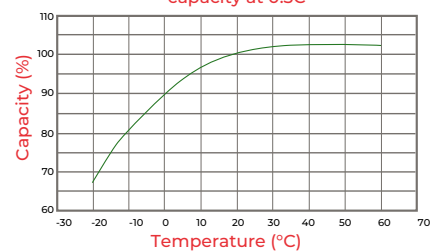
Charging curve vs. Temperature ranges



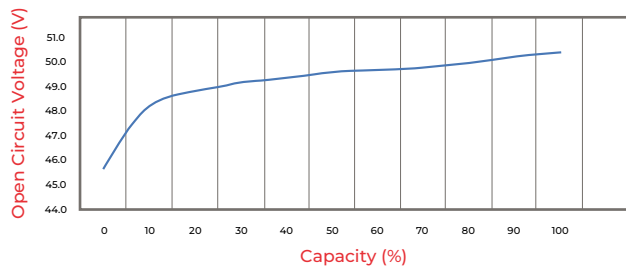
Discharge curve vs. Temperature ranges



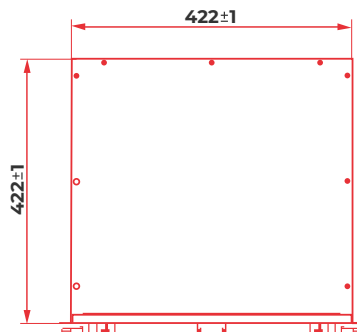
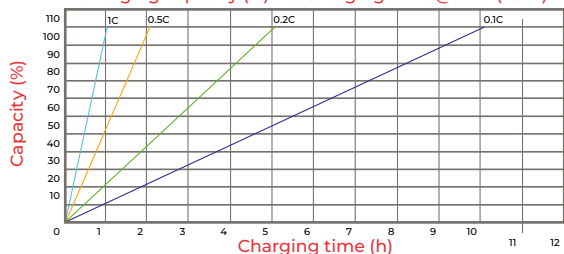
Temperature effects on capacity at 0.5C



Battery Capacity (SOC) Vs. Open Circuit Voltage (OCV)



Charging capacity (%) Vs. Charging time @77°F (25°C)



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* Product specifications are subject to change without notice.

* US-V2510-REV 1.03

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