

U27-36XP

Part Number 1008847

Group 27, 36 Volt 50 Ah Lithium Ion Battery Module

The U27-36XP is a high-performance, 36 volt battery, built on a lithium iron phosphate chemistry platform providing a safe, reliable and mobile energy solution. Customers now have a choice of a 36 volt battery in a Group 27 size case providing over 1.9 kWh.

The U27-36XP is ideal for material handling, stationary energy storage, and commercial EV or marine applications. The module's inherent safety, long cycle life, and zero maintenance offers end-users another alternative to lead acid by replacing with our reliable lithium ion solution.



Electrical Specifications

Voltage (nominal)	38.4 V
Capacity @ C/5, 25 °C (typical)	50 Ah
Energy	1.92 kWh
Discharge Cont./Peak (30 sec)	100 A / 150 A
Discharge Cutoff Voltage	30 V
Recommended Charge Voltage	43.8 V
Charge Float Voltage Range	41.4 - 43.8 V
Recommended Charge CCCV	≤ 25 A to 43.8 V

Discharge Temperature	-10 °C to 50 °C
Charge Temperature	0 °C to 45 °C
Self Discharge @ 25 °C	< 2% per month
Specific Energy	102 Wh/kg
Energy Density	162 Wh/l

Mechanical Specifications

Height (excluding bolts)	225 mm	8.86"
Width	172 mm	6.77"
Length	306 mm	12.0"
Weight	18.7 ± 0.1 kg	41.1 lbs
Cell Configuration	12lFP19/66-33	

Terminal Hardware	M8 x 1.25	
Terminal Torque	16 Nm	142 in-lbs
Plastic Case	Flame Retardant	
IP Rating	IP56	



Features

- >4000 cycles at 80% DOD
- Create systems 36 - 1000 V
- Series and/or parallel operation
- Automatic cell monitoring & balancing
- Temperature monitoring of cells
- Rugged mechanical design
- Footprint of Group 27 lead acid case
- Maintenance-free
- No hydrogen generation or gassing

Benefits of Lithium (LiFePO₄)

Efficient & Fast Charging

High charge efficiency of >90%. Increases productivity, reduces energy costs and eliminates the need for investments in battery change out systems.

High, Uniform Discharge Voltage

Delivers stable voltage during discharge. Increases equipment performance and reduces motor heat.

Longer Life

Provides > 10 times the life of lead acid batteries.

Robust Safety

Multiple levels of protection prevent operation outside of current, voltage, and temperature limits.

- No thermal runaway
- No corrosive acid leaks
- No explosive gassing

Space and Weight Efficiency

Systems provide >3 times the energy per weight of lead acid.

Environmentally Safe

Does not contain toxic metals such as cobalt, lead, cadmium, nor any corrosive acids or alkalis.

Contact Us

lithionbattery.com/contact-us/

North American Region
america-sales@lithionbattery.com

European Region
emea-sales@lithionbattery.com

Battery Management System

The U-Charge Battery Management System (U-BMS) integrates seamlessly with U27-36XP applications. The battery system manages all battery module parameters in real-time and system information can be monitored via CANbus.



Event	Default Warning (Adj)	Fault
High Temperature	55 °C	65 °C
Low Temperature	-5 °C	-15 °C
High Voltage	3.9 V	any cell 4.2 V
Low Voltage	2.8 V	any cell 2.0 V
Over Current	time + current	
Low SOC	20%	

Protection

Over/Under Voltage
Over/Under Temperature
Over Current
Pre-Charge Control

Data Logging w/External Device

Faults/Warnings
I/V/T History
State of Charge

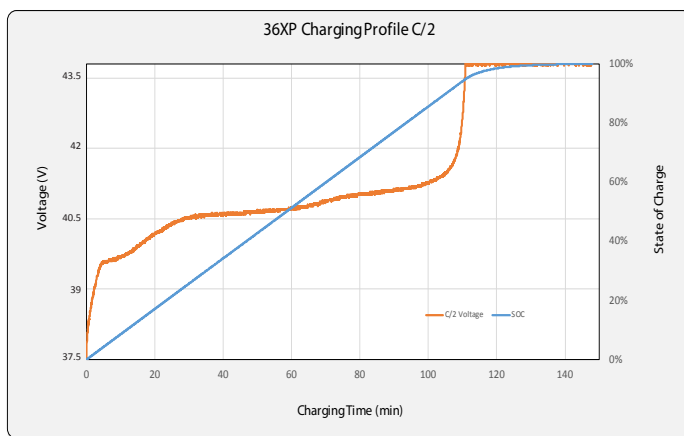
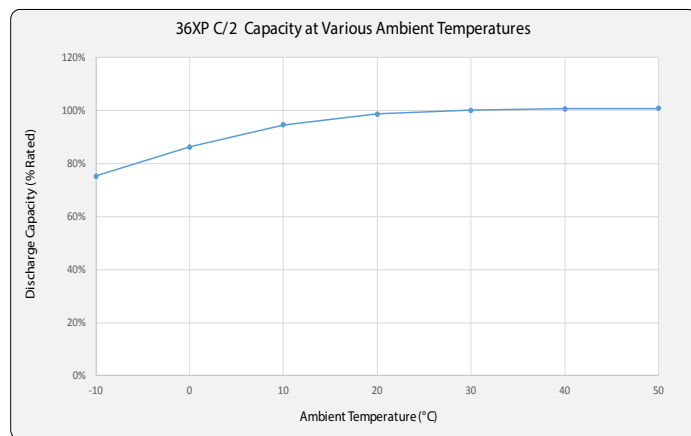
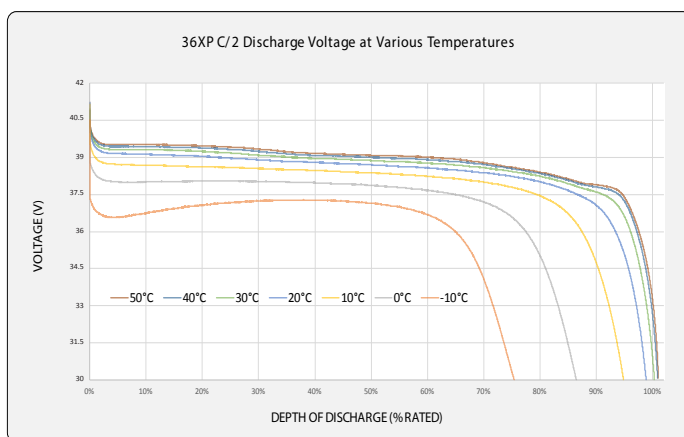
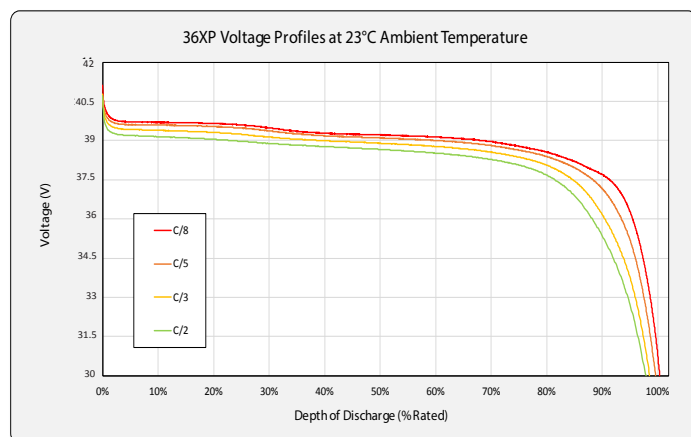
Software

Firmware
Real Time Diagnostics
Data Download
Data Analysis

Communication

Cable to USB
CAN2.0B

Performance



Certifications

- UL 1642 (cells)
- FCC Class B, CE
- UN 38.3

Shipping Classifications

UN 3480
Class 9



All specifications are subject to change without notice. All information provided herein is believed, but not guaranteed, to be current and accurate.

Copyright © 2021 Lithion Battery Inc.

lithionbattery.com

