

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 |
| Cont. Current/Peak (30 sec) | 100 A / 150 A |
| 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 | 12lFpR19/66-33 | |

| | | |
|-------------------|-----------------|------------|
| 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

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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

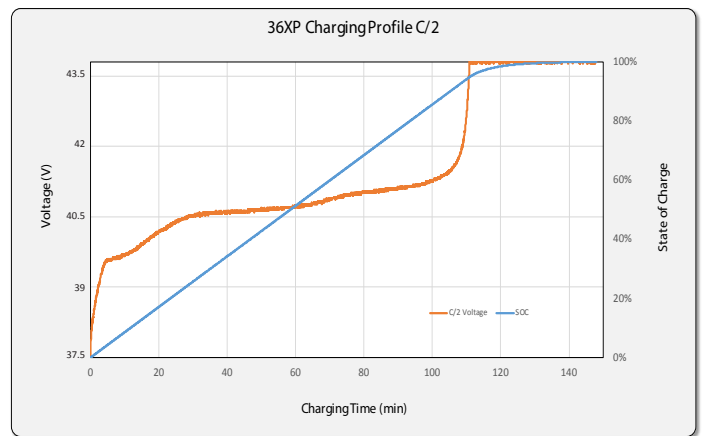
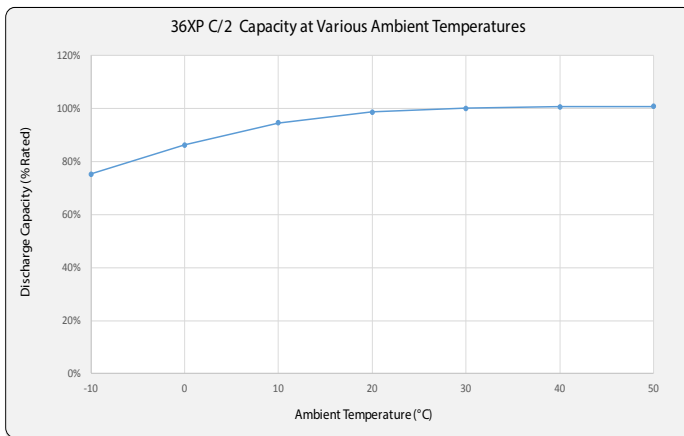
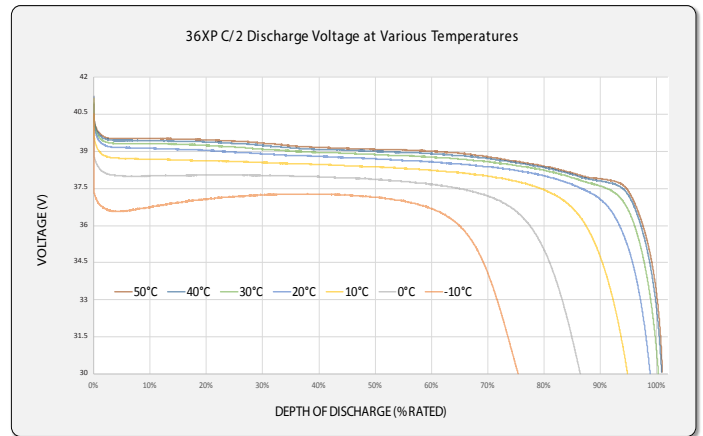
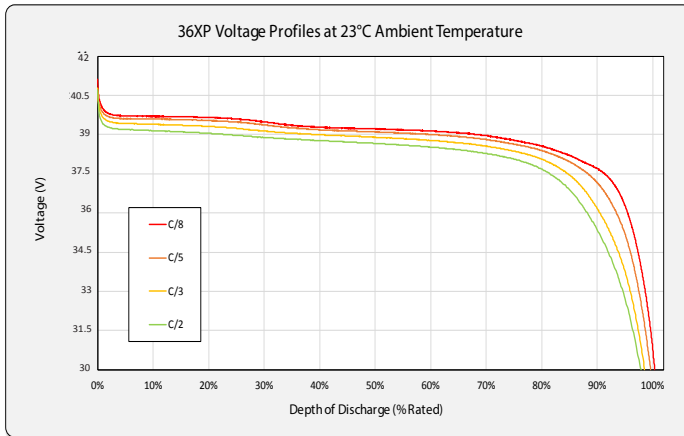
Software

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.

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