# Eco Tree Lithium

# 460 Amp Hour LiFePO4 Battery

Built-in BMS with Voltage, Temperature, Charge, Current, Short Circuit Protection and Bluetooth Monitoring

Light weight and High Power Density—Half the weight of acid battery with twice the power density

Up to 2000 cycles at 100% Depth of Discharge — Up to 4000 at 80% Depth of Discharge

6 Year Warranty  Genuine Physical UK Company in Nottingham  Guaranteed Quality

We only use Genuine "Grade A" LiFePO4 Cells in this battery

## Voltage

| | |
|---|---|
| Nominal Voltage | 12.8 V (Used for power calculations) |
| Charge Voltage | 14.2 V—14.7 V (GEL, AGM/SLA and Lithium Chargers work in this voltage range) |
| Low Voltage Cut-Off | 10.8 V (The battery will activate over-discharge protection at 10.8 V) |
| High Voltage Protection | 15.0 V (The battery will activate over-charge protection at 15.0 V) |

## Current

| | | |
|---|---|---|
| Maximum Discharge | Current | 250 Amps |
| | Power | 3200 Watts (12.8 V x 250 Amps) |
| | Pulse | 300 Amps (<30 Seconds) (essential to allow some devices to start up) |
| Maximum Charge | Current | 230 Amps |
| | Power | 2944 Watts (12.8 V x 230 Amps) |

## Temperature

ALL Eco Tree batteries have temperature protection which will restrict charge and discharge when the cells are outside the optimal operating temperature. The further out of temperature range the battery goes the more aggressive the protection is.

For best performance, keep the battery within the ranges below.

| | | |
|---|---|---|
| Charge Temperature | 0℃—45℃ | (The temperature protection starts restricting charge at 3℃ and 40℃) |
| Built – In Heater | NO | (for regular use in cold conditions, consider our heated batteries) |
| Discharge Temperature | -20℃—60℃ | (The temperature protection starts restricting discharge at 3℃ low and 40℃ high) |
| Storage Temperature | 0℃—45℃ | (storing too cold will cause faster self discharge and storing too hot over long periods will cause cell degradation) |

## Physical Characteristics

| | |
|---|---|
| Weight | 39KG |
| Dimensions | Length 523mm Width 269mm Height 218mm |
| Cells | LFP230000mAh @ 3.2 v |
| Pack Format | 4 cells in Series, 2 banks in Parallel |
| Cell Type | Lightweight, High Power Density, Compact - Prismatic Packs |
| Outer Case | Impact resistant ABS plastic, UL94-Vo Flame Resistant |
| Terminal | M8 Threaded Insert |
| Water / Dust Resistance | IP67 (protection against dust particles and immersion up to 1 metre) |

## Miscellaneous

| | | | |
|---|---|---|---|
| Internal Resistance | 15 ≤mΩ | Self Discharge | Up to 3.5% per month |
| Series Connection | 4 in Series (up to 51.2v) | Automatic Cell Balancer | YES |
| Safe Transport | UN38.3 PASSED | European Conformity | 93/66/EEC |