

### 48 V 200 Ah Iron Phosphate (LiFePO4) Li-ion Golfcart Battery

**PN: Li48-200**

#### Features

- ◆ Drop-in compatible for lead acid golfcart battery, maintenance free
- ◆ About 40% – 70% of the weight of a comparable lead acid battery
- ◆ 150 A discharge; charges in 10 hours with included charger
- ◆ Safe: Lithium Iron Phosphate cells, no hazardous gases
- ◆ Thousands of cycles, to 100% DOD, under normal conditions
- ◆ Built-in protector BMS with cell balancing: over-charge, over-discharge, over-current and over-temperature
- ◆ Wide temperature range:-20 °C – 60 °C
- ◆ 6 year limited warranty
- ◆ Some battery components may be recycled or re-purposed



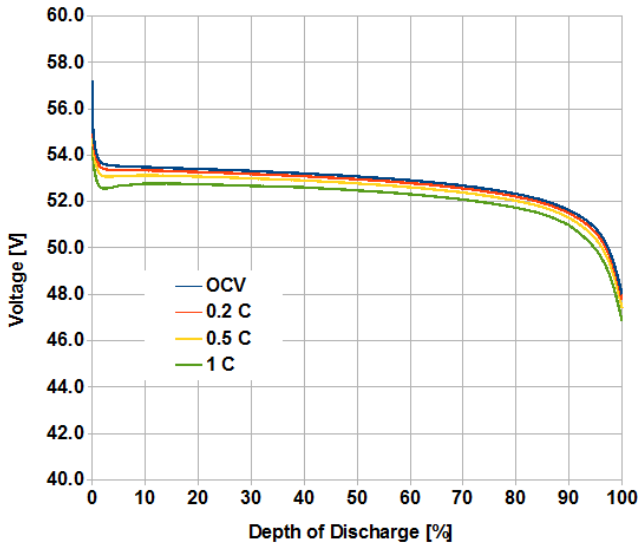
Charger and SOC Gauge Not included

Specifications			Min	Nom	Max	
Electrical	Voltage	Open circuit, 2 hour relaxation	48.0	53.2	57	V
	Capacity	1/20 C		200		Ah
	Energy	1/20 C		16		kWh
	Internal resistance	25 °C		14		mΩ
	Cycle life	0.5C charging/discharging, 25 °C, to 90% of nominal capacity		2000		Cycles
	Self discharge	25 °C			3.5	% / month
Mechanical	Dimension	Excluding power cable	543 x 343 x 295			mm
	Connection		M8 Stud			-
	Mass			96		Kg
	Ingress protection	2 mm Galvanised Power-Coated Steel	IP65			-
Operating conditions			Min	Nom	Max	
CCCV charging	Constant current	CC stage ("bulk")			50	A
	Peak current	10 s max ("regen")			100	A
	Constant voltage	CV stage ("absorption"), until current drops below 5 A, 2 hr max	54.8	55.2	57	V
	Float voltage			53.6	54.0	V
	Temperature		0		45	°C
Regen	Peak current	10 s max			100	A
	Voltage				55.6	V
Discharging	Continuous current				50	A
	Peak current	10 s max			120	A
	Cut-off voltage			44.8		V
	Temperature		-20		60	°C
Environmental	Temperature		0		45	°C
	Humidity		35		75	%

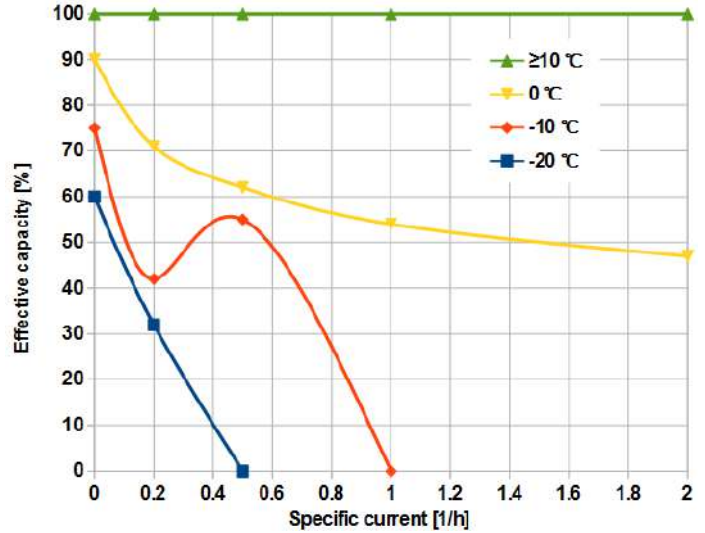
## 48 V 200 Ah Iron Phosphate (LiFePO4) Li-ion Golfcart Battery

PN: Li48-200G

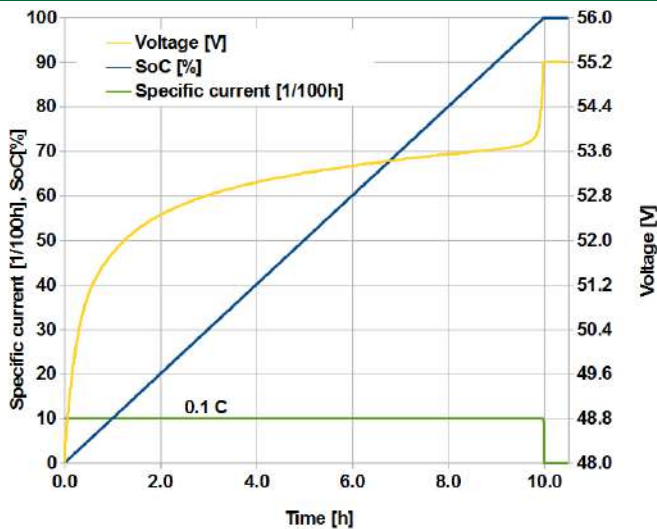
Discharge curves at various currents, 25 °C



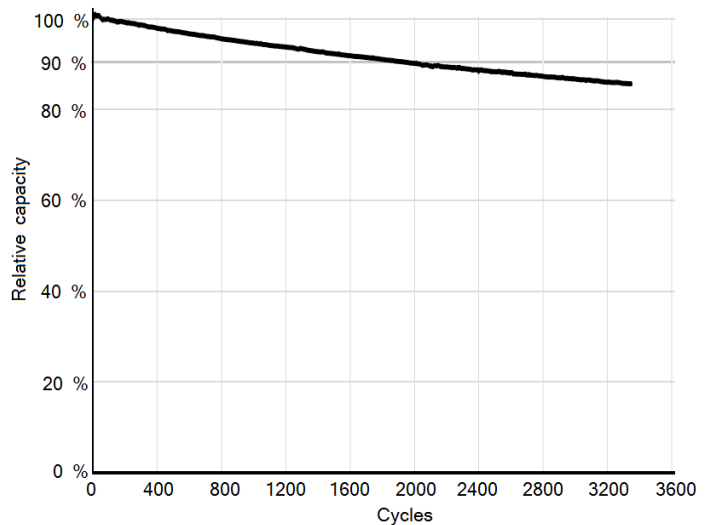
Effective capacity at various temperatures, currents



CCCV charge curve, @ recommended settings, 25 °C



Cycle life, 25 °C, 0.5 C



### Battery care

- ◆ Storage:
  - ◆ Bring to ~50 % charge, then store in a cool, dry place
  - ◆ Do not drop
- ◆ Charging:
  - ◆ A CV stage that lasts too long degrades the battery rapidly
  - ◆ Stand-by applications: exceeding 53.6 V degrades the battery
  - ◆ Charging is disabled below freezing; warm the battery first
  - ◆ Maximize capacity by regularly charging to the specified voltage
- ◆ Discharging:
  - ◆ If no voltage, the battery is off; charge it to wake it up

### System design

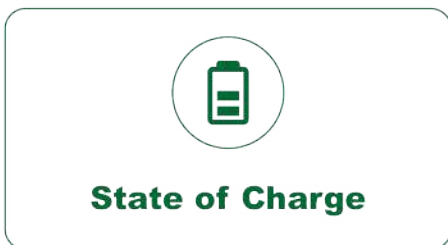
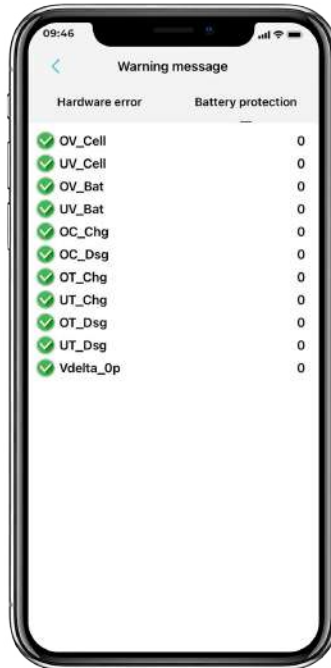
- ◆ Mount Upright
- ◆ DO NOT connect in parallel with other batteries, of any type
- ◆ DO NOT connect in series with other batteries, of any type

Refer to user manual for complete information.

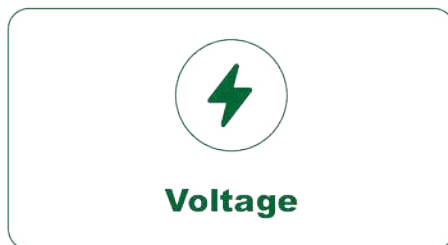
## 48 V 200 Ah Iron Phosphate (LiFePO4) Li-ion Golfcart Battery

PN: Li48-200G

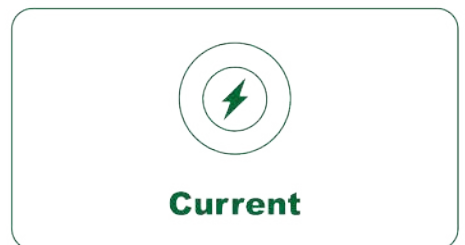
### Bluetooth Phone App connected to a Battery



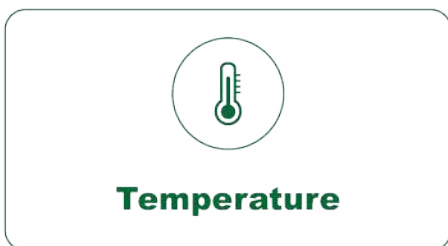
**State of Charge**



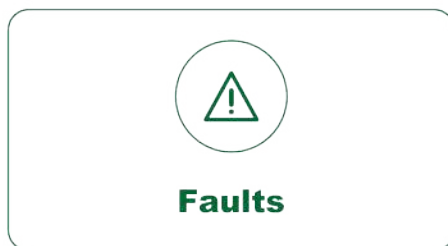
**Voltage**



**Current**



**Temperature**



**Faults**



**Protection**

