

### 12 V 300 Ah Lithium Iron Phosphate (LiFePO4) Li-ion Battery

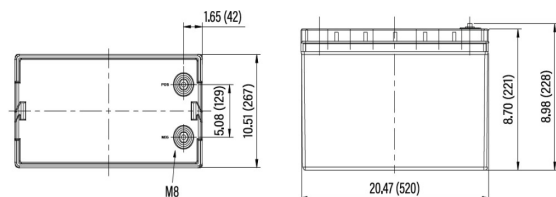
**PN: Li300**

#### Features

- ◆ Drop-in compatible for 12 V lead acid battery, maintenance Free
- ◆ About 40% – 70% of the weight of a comparable lead acid battery
- ◆ 200 A discharge; charges in 2 hours
- ◆ 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
- ◆ Supports up to 4 batteries in Series (51.2V)
- ◆ 6 year limited warranty
- ◆ Some battery components may be recycled or repurposed

#### Applications

- ◆ UPS
- ◆ Solar & Wind Power System
- ◆ Mobility
- ◆ Electric Vehicle, E-bike, E-Rickshaw etc.
- ◆ Lighting
- ◆ Leisure and Marine

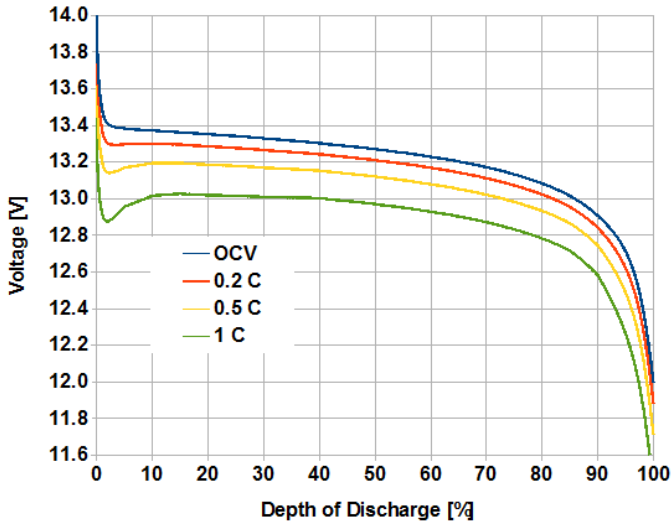


Specifications			Min	Nom	Max	
Electrical	Voltage	Open circuit, 2 hour relaxation	12.0	13.3	13.5	V
	Capacity	1/20 C		300		Ah
	Energy	1/20 C		3840		Wh
	Internal resistance	25 °C		21		mΩ
	Cycle life	0.5C charging/discharging, 25 °C, to 90% of nominal capacity		2000		Cycles
	Self discharge	25 °C			3.5	% / month
Mechanical	Dimension	Including terminals	520 x 267 x 228			mm
	Connection		M8 terminals			-
	Mass			TBD		Kg
	Ingress protection	Thermoplastic enclosure	IP55			-
Operating conditions			Min	Nom	Max	
CCCV charging	Constant current	CC stage ("bulk")			150	A
	Peak current	10 s max ("regen")			200	A
	Constant voltage	CV stage ( "absorption"), until current drops below 5 A, 2 hr max	13.7	13.8	13.9	V
	Float voltage			13.4	13.5	V
	Temperature		0		45	°C
Discharging	Continuous current				200	A
	Peak current	10 s max			400	A
	Cut-off voltage			11.2		V
	Temperature		-20		60	°C
Environmental	Temperature		0		45	°C
	Humidity		35		75	%

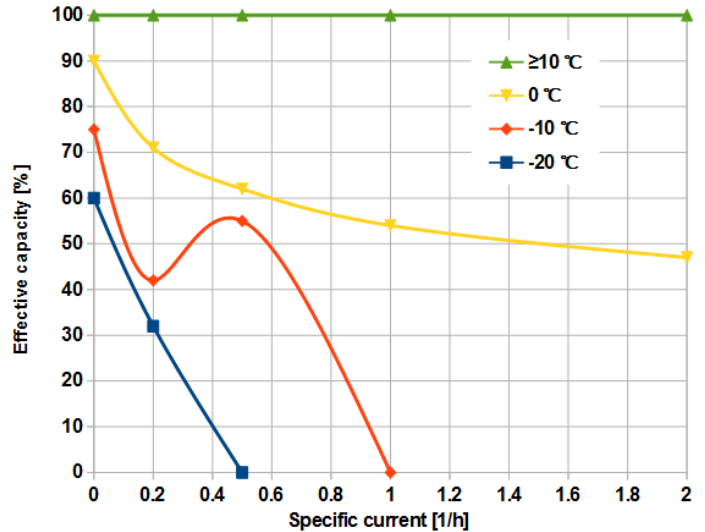
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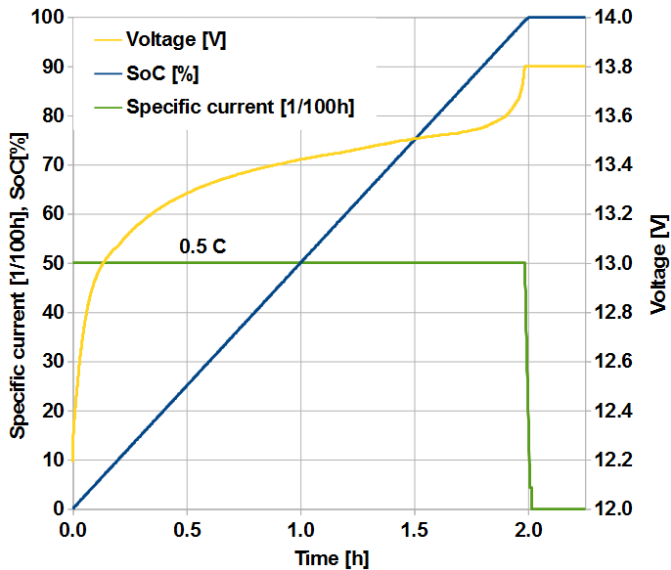
Discharge curves at various currents, 25 °C



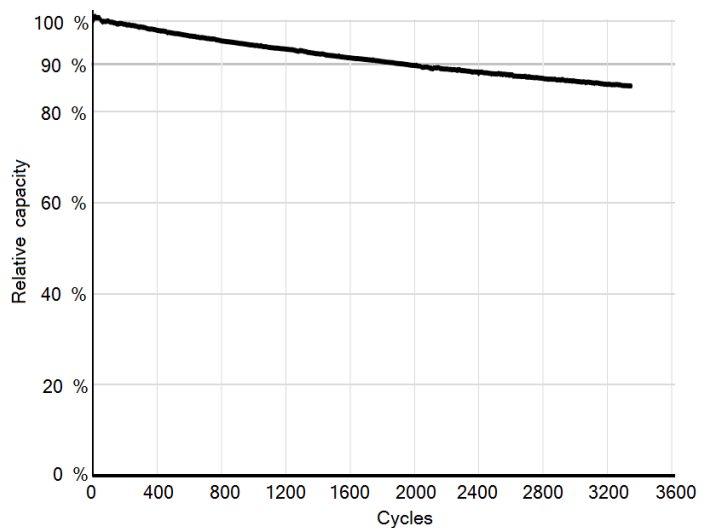
Effective capacity at various temperatures, currents



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 13.4 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

- ◆ Though it may oriented in any direction, upright use is preferable
- ◆ DO NOT connect in parallel with other batteries, of any type
- ◆ Connect at most 4 in series, same type, same State of Charge

Refer to user manual for complete information.