

12 V 400 Ah Lithium Iron Phosphate (LiFePO4) Li-ion Battery

PN: Li400

Features

- ◆ Drop-in compatible for 12 V lead acid battery, maintenance Free
- ◆ About 40% – 70% of the weight of a comparable lead acid battery
- ◆ 100 A discharge; charges in 4 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)
- ◆ 5 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

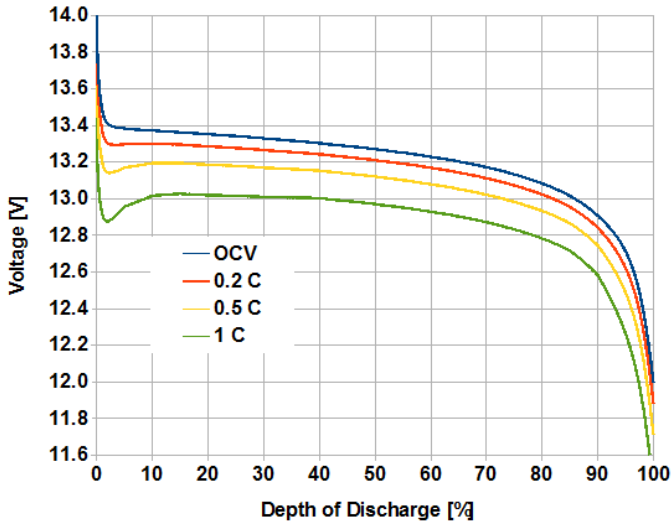


Specifications			Min	Nom	Max	
Electrical	Voltage	Open circuit, 2 hour relaxation	12.0	13.3	14.4	V
	Capacity	1/20 C		400		Ah
	Energy	1/20 C		5120		Wh
	Internal resistance	25 °C		21		mΩ
	Cycle life	0.5C charging/discharging, 25 °C, to 90% of nominal capacity		2000		Cycles
	Self discharge	25 °C			3.5	% / month
Mechanical	Dimension	Excluding power cable	380 x 280 x 290			mm
	Connection		M8 Stud			-
	Mass			42		Kg
	Ingress protection	Powder-coated steel enclosure	IP55			-
Operating conditions			Min	Nom	Max	
CCCV charging	Constant current	CC stage ("bulk")			50	A
	Peak current	10 s max ("regen")			75	A
	Constant voltage	CV stage ("absorption"), until current drops below 5 A, 2 hr max	13.7	13.8	14.4	V
	Float voltage			13.4	13.5	V
	Temperature		0		45	°C
Discharging	Continuous current				100	A
	Peak current	10 s max			150	A
	Cut-off voltage			11.2		V
	Temperature		-20		60	°C
Environmental	Temperature		0		45	°C
	Humidity		35		75	%

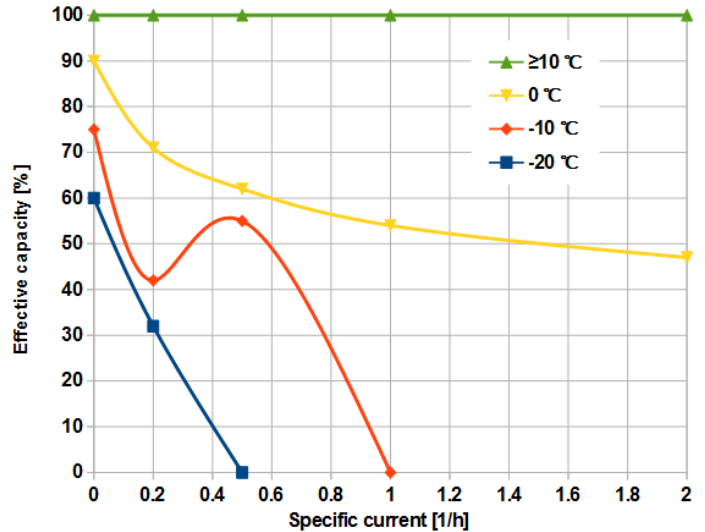
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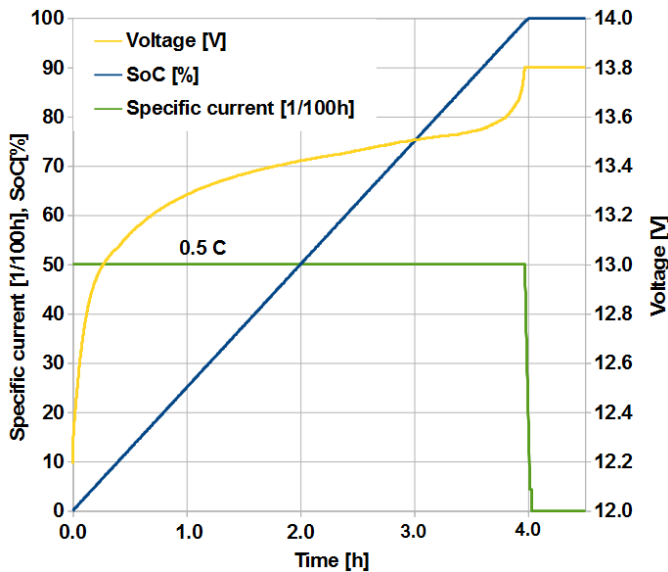
Discharge curves at various currents, 25 °C



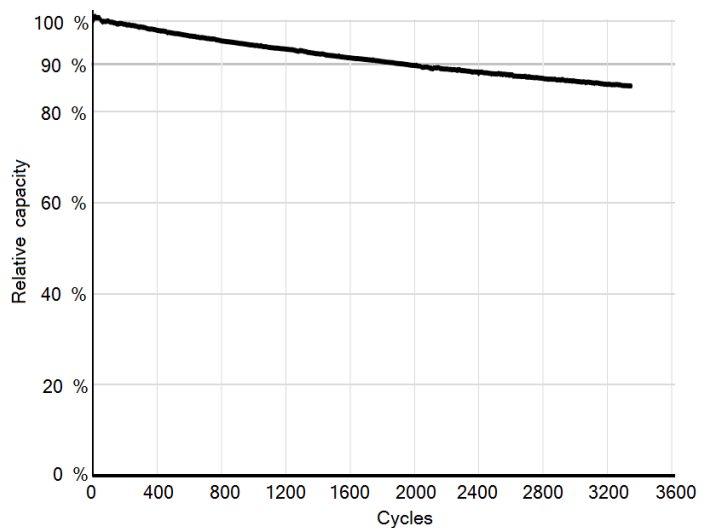
Effective capacity at various temperatures, currents



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

- ◆ 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.