

# 36V 105Ah (LiFePO4) Li-ion Battery

## PN: Li36-105

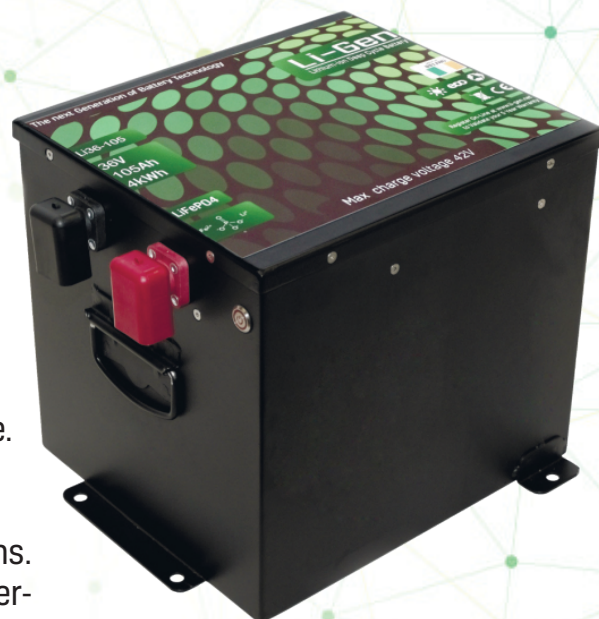
**Li-Gen**  
Lithium-ion Deep Cycle Battery

### Applications

- UPS
- Mobility
- Electric Vehicle, E-bike, E-Rickshaw etc.
- Lighting
- Leisure and Marine

### Features

- Drop-in compatible for lead acid battery, maintenance free.
- 100A 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: -4°F to 140°F (-20°C - +60°C).
- 8 Years Limited Warranty.
- Some battery components may be recycled or repurposed.



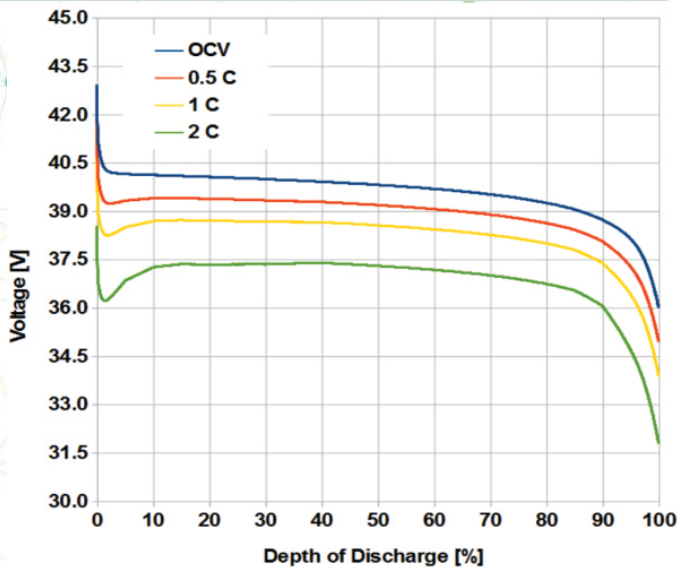
Product specifications		Min	Nom	Max	
Electrical					
Voltage	Open circuit, 2 hour relaxation	36.0	39.9	43.2	V
Capacity	1/20 C		105		Ah
Energy	1/20 C		4.0		kWh
Internal resistance	77°F (25°C)		11.2		mΩ
Cycle life	0.5C charging/discharging, 77°F (25°C) to 90% of nom. capacity		2000		Cycles
Self discharge	77°F (25°C)			3.5	%/month
Mechanical					
Dimension (inches)	LWH	12.20 x 10.71 x 11.10			inches
Dimension (mm)	LWH	310 x 272 x 282			mm
Connection		M8 Stud			-
Ingress protection	Powder-coated steel enclosure	IP55			-
Mass		66.14 / [30]			lbs / [kg]
Operating conditions		Min	Nom	Max	
CCCV charging					
Constant current	CC stage ("bulk")			52	A
Peak current	10s max			65	A
Constant voltage	CV stage ("absorption"), until current drops below 5A, 2hr max	41.1	41.4	43.2	V
Float voltage			40.2	40.5	V
Temperature	With heat pad	14 / [-10]		113 / [45]	°F / [°C]
Temperature	Without heat pad	32 / [0]		113 / [45]	°F / [°C]
Discharging					
Continuous current				200	A
Peak current	10s max			225	A
Cut-off voltage			33.6		V
Temperature		-4 / [-20]		140 / [60]	°F / [°C]
Environmental					
Humidity		35		75	%

# 36V 105Ah [LiFePO4] Li-ion Battery

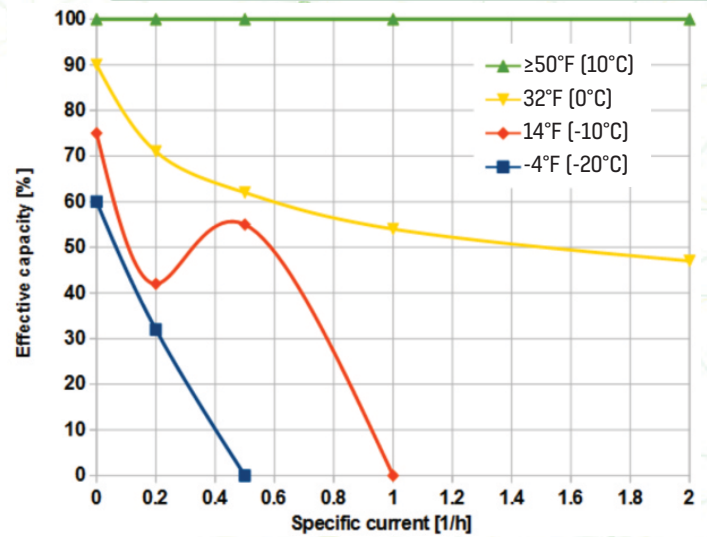
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Lithium-ion Deep Cycle Battery

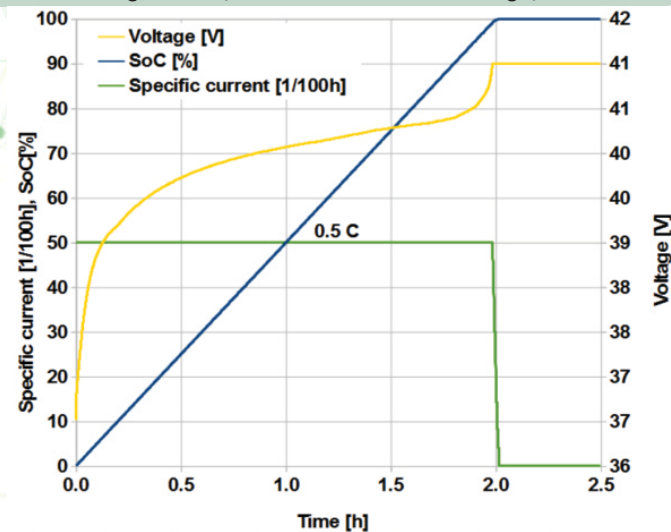
Discharge curves at various currents, 77°F [25°C]



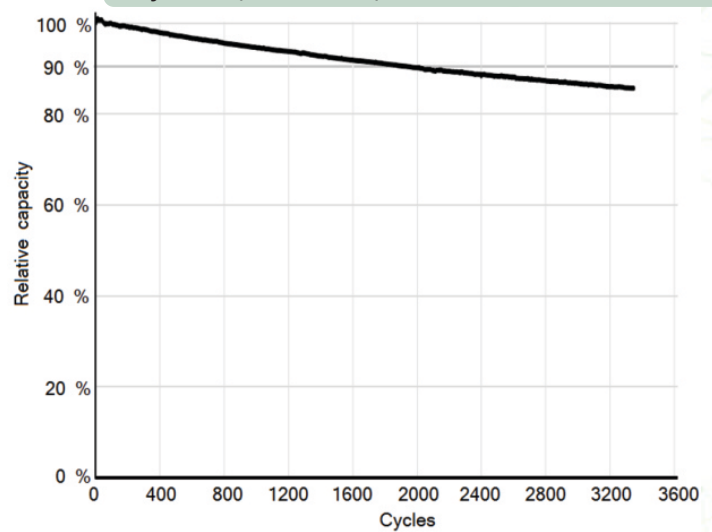
Effective capacity at various temperatures, current



CCCV charge curve, @recommended settings, 77°F [25°C]



Cycle life, 77°F [25°C], 0.5C



### 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 43.2 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 with CV Charger

### System design

- Though it may oriented in any direction, upright use is preferable.
- Connect no more than 4 Batteries in parallel.
- DO NOT connect in series with other batteries, of any type.

Refer to user manual for complete information.



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Performance specifications		Min	Nom	Max	
Electrical					
Energy storage	1-hour discharge, new	3.35			kWh
	10-hour discharge, new	4.19			kWh
	Derating, 1 cycle per day			-0.0164	%/day
	Derating, 1 cycle every 2 days			-0.0123	%/day
	Derating, 1 cycle every week			-0.0094	%/day
	Derating, not cycled			-0.0082	%/day
Round-trip efficiency	1-hour discharge, 2-hour charge, new	96.5			%
	Derating, 1 cycle per day			-0.0055	%/day
	Derating, 1 cycle every 2 days			-0.0041	%/day
	Derating, 1 cycle every week			-0.0031	%/day
	Derating, not cycled			-0.0027	%/day
Self discharge	Powered off, 100% SoC to 0% SoC, new		2.3		years
	Powered on, no load, 100% SoC to 0% SoC, new		23		days

Relative energy, 77°F (25°C), 100% to 0% cycles, ≤ 0.5 MW

