

12V 105Ah (LiFePO4) Li-ion Battery

PN: Li-L105

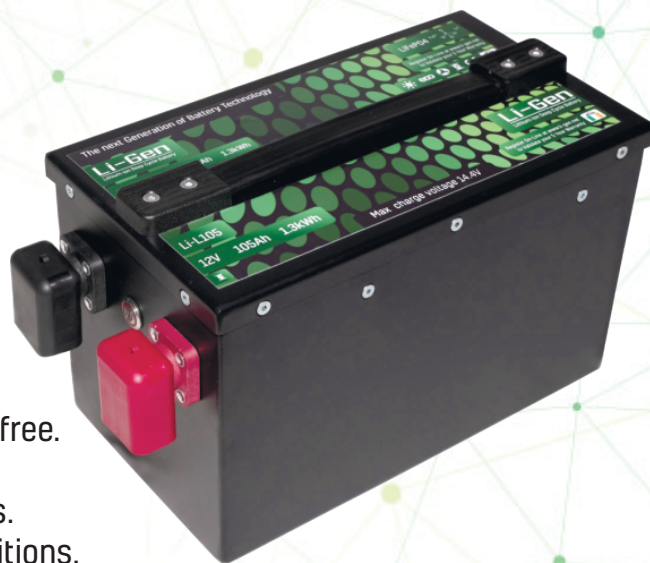
Li-Gen
Lithium-ion Deep Cycle Battery

Applications

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

Features

- Drop-in compatible for lead acid battery, maintenance free.
- 200A 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.



WARRANTY
8 YEARS

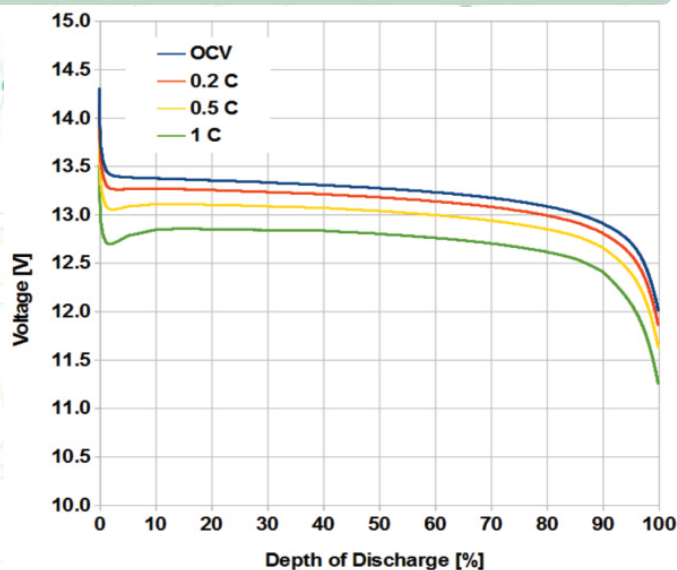
Product specifications		Min	Nom	Max	
Electrical					
Voltage	Open circuit, 2 hour relaxation	12.0	13.3	14.4	V
Capacity	1/20 C		105		Ah
Energy	1/20 C		1.3		kWh
Internal resistance	77°F (25°C)		4.5		mΩ
Cycle life	0.5C charging/discharging, 77°F (25°C) to 90% of nom. capacity		2000		Cycles
Self discharge	77°F (25°C)			3.5	%/month
Mechanical					
Dimension (inches)	LWH	11.3 x 6.3 x 6.89			inches
Dimension (mm)	LWH	287 x 160 x 175			mm
Connection		M8 Stud			-
Ingress protection	Powder-coated steel enclosure	IP55			-
Mass		22.05 / [10]			lbs / [kg]
Operating conditions		Min	Nom	Max	
CCCV charging					
Constant current	CC stage ("bulk")			52	A
Peak current	10s max			210	A
Constant voltage	CV stage ("absorption"), until current drops below 5A, 2hr max	13.7	13.8	14.4	V
Float voltage			13.4	13.5	V
Temperature	With heat pad	14 / [-10]		113 / [45]	°F / [°C]
Temperature	Without heat pad	32 / [0]		113 / [45]	°F / [°C]
Discharging					
Continuous current				105	A
Peak current	10s max			210	A
Cut-off voltage			11.2		V
Temperature		-4 / [-20]		167 / [75]	°F / [°C]
Environmental					
Humidity		35		75	%

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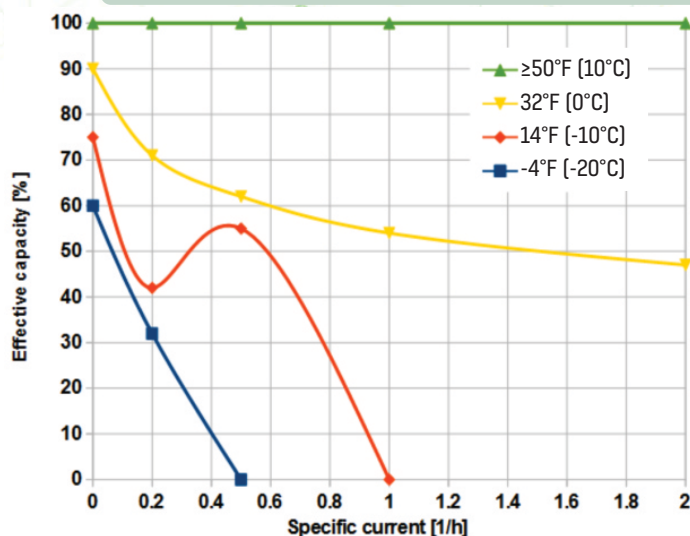
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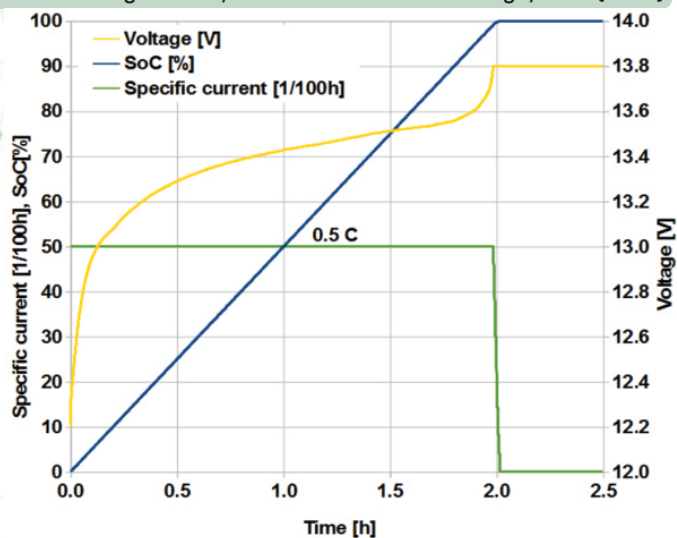
Discharge curves at various currents, 77°F [25°C]



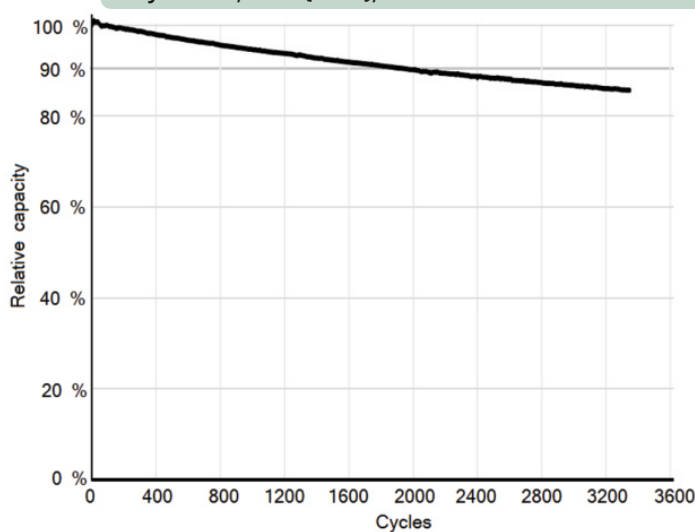
Effective capacity at various temperatures, current



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 14.4 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 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	1.12			kWh
	10-hour discharge, new	1.40			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

