



IMPERIUM 12V LITHIUM ION BATTERIES



Imperium Lithium Ion Batteries have up to 9X longer life than similar Ah AGM batteries.

In testing:

- 1x 105Ah Imperium Lithium Ion Battery has a lifetime capacity of 141,000 Ah
- 1x 100Ah AGM Battery has a lifetime capacity of 20,000 Ah



Imperium Lithium Ion Batteries are over 40% lighter than AGM batteries.



Imperium Lithium Ion Batteries can be discharged safely up to 80%, whilst still operating at 100% capacity, without impacting battery life.



Imperium Lithium Ion Batteries have a built in battery management system (BMS) with LED display, and Bluetooth connectivity for managing and monitoring the battery(ies) via the Imperium App.



An Imperium battery's lifetime capacity is 141,000Ah vs 20,000Ah of a standard 100Ah AGM battery. That is an 8.8X improvement!

IMPERIUM VS AGM COMPARISON TEST

	AGM 100Ah	Imperium 100Ah
Depth of Discharge	50%	80%
Maximum Capacity	100Ah	105Ah
Battery Weight	28.7kg	11.8kg
Usable Capacity	50Ah	83Ah
Cycles (of usable capacity)	500	2000
Effective Lifetime Capacity	20,000Ah	141,000Ah

YOUR 12V POWER NEEDS COVERED

WHAT YOU NEED TO KNOW ABOUT LITHIUM

Compared with traditional battery technology, like AGM leisure batteries, lithium-ion batteries charge faster, last longer and have a higher power density for more battery life in a lighter package.

Imperium Lithium Ion batteries are made with high spec components, materials and prismatic cells and they incorporate an LED display panel, Bluetooth connectivity and a battery management system accessible via the Imperium App - they are the complete package at an affordable price.

If you require a long lasting, robust and reliable 12V power supply that comes in a lightweight package then the Imperium Lithium Ion range of batteries are the answer for you.



2 YEAR
WARRANTY



Imperium 12v Lithium Battery Technical Data

Battery Type	105Ah 12v LiFePo	210Ah 12v LiFePo	415Ah 12v LiFePo
Part Number	IMP001	IMP007	IMP008
Nominal voltage	12.8V	12.8V	12.8V
Nominal Capacity	105A	210Ah	415Ah
Charge Port Type	M8	M8	M8
Communication Mode	Bluetooth App	Bluetooth App	Bluetooth App
LED Display	No	No	No
Serial Module Max	1	1	1
Parallel Module Max	6 (voltage rangeIV)	6 (voltage rangeIV)	6 (voltage rangeIV)
Cycle Life (DOD - 80% under controlled conditions)	>2000	>2000	>2000

Standard Charge Specification (Lithium Profile Charger Required)

Battery Charge Temperature	0-45C	0-45C	0-45C
Normal Charge Voltage CV/CC	14.6V	14.6V	14.6V
Standby (Float) Voltage	13.8V	13.8V	13.8V
Maximum Current Charge	50A	60A	60A
Recommended Charge Current for Maximum Life	20A	60A	60A

Standard Discharge Specification

Battery Discharge Temperature	-20 to 55C	-20 to 55C	-20 to 55C
Battery Output Voltage Range	10-14.6V	10-14.6V	10-14.6V
Maximum Discharge Current	100A	100A	100A
Pulse Discharge Current	120A	120A	120A
Discharge Cut-off Voltage	10V	10V	10V

Circuit Protection

The battery is supplied with a LiFePo battery management system (BMS) that can monitor and optimise each single prismatic cell during charge and discharge, to protect the battery pack from overcharge, over discharge and short circuit. Overall the BMS helps to ensure safe and accurate operation of the battery. A free Imperium BMS App is available via the Apple and Android App Store to provide oversight via the App.

Over-Charge Protection

Over-Charge Protection Per Cell	3700mv	3700mv	3700mv
Over-Charge Release Per Cell	3350mv	3350mv	3350mv
Over Charge Release-Method	Discharge	Discharge	Discharge

Over Discharge Protection

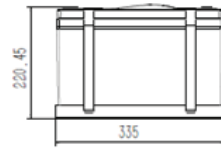
Over-Charge Protection Per Cell	2500mv	2500mv	2500mv
Over-Charge Release Per Cell	3000mv	3000mv	3000mv
Over Charge Release-Method	Charge	Charge	Charge

Over Current Protection

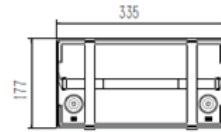
Discharge Over Current	102A	125±3A	125±3A
Protection Reset Time	2S	1.5S	1.5S
Over Current Release Method	Disconnect the load	Disconnect the load	Disconnect the load

Over Temperature Protection

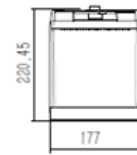
Battery Discharge Over Temperature	55C	55C	55C
	-20C	-20C	-20C
Battery Charge Over Temperature	50C	50C	50C
	-10C	-10C	-10C
Short Circuit Protection Current	300A ±20A	300A ±20A	300A ±20A



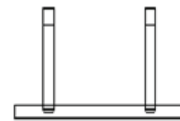
SIDE



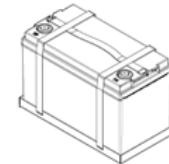
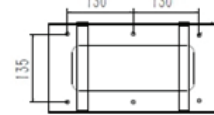
TOP



END



TRAY&STRAP



12V105Ah with Tray & strap

Dimensions

Battery Type	105Ah 12v LiFePo	210Ah 12v LiFePo	410Ah 12v LiFePo
Part Number	IMP001	IMP007	IMP008
Length mm	330	345	520
Width mm	173	190	270
Height mm	220	245	220
Weight Kg	10.7	18.5	43.8

Storage Information

Temperature and Humidity Range	-10 to 45C	-10 to 45C	-10 to 45C
Self Discharge Rate	< 10% per month	< 10% per month	< 10% per month

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