LITE BLOX

high performance lightweight batteries

FAQ
frequently asked questions

Non-consideration can result in a loss of warranty.

We hereby declare that to the best of my knowledge all information supplied in this form is correct and complete; subject to correction. Subject to modification

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What is a lithium iron phosphate battery?
The LiFePO4 battery is a further stage of the common LiPO battery, on which the lithium cobalt cathode has been replace by a lithium iron phosphate.
It is capable of high charge/discharge currents, withstands extreme temperatures and an expanded lifespan:

Vergleich Akkuvarianten:

	Pb-Säure	Ni-Cd	Ni-MH	LiCoO2	LiFePO4
Erscheinungsjahr	1890	1956	1990	1992	2002
Spannung Einzelzelle [V]	2,0	1,2	1,2	3,6	3,3
Energiedichte [Wh/kg]	30	50	80	150	100
Lebenszyklen [Be- / Entladen]	300	1000	500	800	2000
Selbstentladung [Monat]	20,0	20,0	20,0	5,0	5,0

What is the advantage on LiFePO4 cells, compared to common LiPO batteries in mobile phones & laptops?

- no fire hazard, fail safe
- withstands overcharge / deep discarge
- capable of high charge/discarge currents
- expanded life cycles
- withstands extreme temperatures

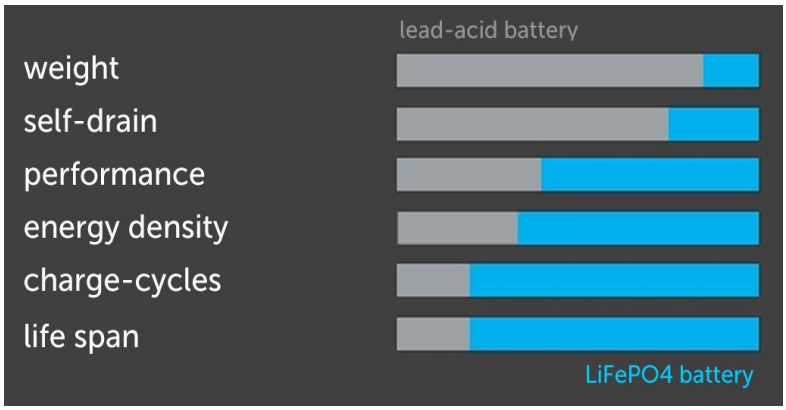
Why can you replace the heavy lead-acid battery with this?
You can nearly draw all the energy saved in a LiFePO4 cell whereas from a lead-acid cell it is hardly 30%. Furthermore you can start your car more times repeatable because the voltage stays consistent over the whole decharging process, whereas lead-acid is dropping rapidly.
field examples:

1.) from our LITEBLOX LB11XX you can draw 150W power (front- / rearlights) for 30 minutes and still being able to start your vehicle afterwards

2.) our testcar (Mitsubishi Lancer EVO9 2,0L turbo) can be started >30times with the LB11XX (fully charged / cold engine / t=10°C).

What does "Pb-eq" stand for?
Our LITEBLOX are engineered as "starter batteries", different from "deep-cycle batteries" where you draw the whole capacity within an application. To compare our products with starter batteries on lead-acid basis we setup a lead-equivalent "Pb-eq" with factor 3 (based on the information mentioned above).

Why invest more than in a standard starter battery?
LiFePO4 cells are actually quite expensive, whereas the technique itself comes with significant advantages over the conventional vehicle starter batteries:



Our innovative housing concept on CFK with a special foam decouples the cells thermally plus mechanically. Furthermore we only use premium LiFePO4 cells from A123 Systems. This causes in a significant enhancement on lifespan, compared to common competitor products - plus improvement on safety (intelligent electronics) and versatility (mounting bracket).

Can I substitute the LITEBLOX "plug'n'play" with my standard car battery?
The working space on lead-acid is very similar to LiFePO4, therefore our LITEBLOX can be run on common alternators (13,6 - 14,6V).
If the alternator voltage should be above 14,6V (at some latest vehicles with battery management systems), the electronics in our LITEBLOX will signal this by a permanent acoustic warning tone. In this case we can provide a special device to cut the voltage.
Furthermore we deliver mounting material to install our products over the versatile bracket, nearly everywhere or substitute your standard battery with our OEM bracket.

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Do I have to balance or maintain-charge my LITEBLOX?
Our products work with an intelligent electronics which is the interface to the alternator and does a continuous cell surveillance and balance charging if necessary. You only have to maintain the LITEBLOX in case of deep- / overcharge.

Can I charge the LITEBLOX with any common charger?
To prevent damages and performance loss, our products are only to be maintained with the charger LB100I.

Can I jump-start a deep charged LITEBLOX (with cable or booster)?
Our intelligent electronics does a constant cell surveillance which causes an acoustic alarm when leaving the working space of the battery cells (deep- / overcharge). If a deep charged LiFePO4 cell is treated with high voltage (alternator, booster...) this may harm the cells permanently (similar to any other battery technology). So if your LITEBLOX should be deep charged (<8,0V between the poles), never try to force start your car and use our charger LB100I instead.

Any problems with an alarm system or other consumers in my car?
If you don't use your vehicle for long periods, please make sure to cut off the LITEBLOX from the electronics or use our charger LB100I for maintain charging. If there is are no electrical consumers at all, the LiFePO4 based battery will last much longer than your standard one because of the low self-drain.

Can I use my LITEBLOX during the winter?
Our LiFePO4 cells can basically be used down to -20°C without any major harm to the cells. Compared to standard (Pb-based) batteries, the performance of this cells is furthermore decreasing to a similar amount when exposed to low temperatures.
But in contrast to this, a LiFePO4 cell is producing its own heat environment when drawing current and is therefore even more reliable then. Further information in this Video.
Because the performance of a battery is always lower at high temperatures plus the required engine cranking power higher, we would only recommend our LB19XX and LB26XX models for use during winter season.

If you consider the issues mentioned above, the lifespan of our LITEBLOX batteries is 3-5x higher, than with common lead-acid based starter batteries.