Lithium iron phosphate battery temperature range

Lithium iron phosphate battery temperature range

Lithium batteries contain no water, so temperature limitations based on the freezing temperature of water are misleading at best. The REAL freezing point of a lithium battery would be associated with the electrolyte freezing point which is less than -60?C.

A lithium battery, like all other types of batteries, have reduced performance and service life when operating at temperatures below room temperature. Performance reductions are in the form of reduced power (lower cranking amps), reduced capacity (less amp-hours stored), and slower charge times. Reduction in service life is NOT imminent but rather measured by months (i.e. 60 month service life versus 72 month service life).

Other common inaccurate online statements read like "permanent damage will result from charging below freezing." Stating that permanent damage will result is like saying landing an aircraft will result in permanent damage to your tires. It is more appropriate, and less provocative to say landing will result in normal or expected wear.

This table provides an overview of how temperature affects the performance of Lithium Iron Phosphate (LiFePO4) batteries across different temperature ranges. Optimal performance is typically achieved within the 0?C to 25?C range, while extreme temperatures can lead to reduced capacity, accelerated degradation, and safety concerns.

Web: https://www.sumthingtasty.co.za/contact-us/
Email: energystorage2000@gmail.com
WhatsApp: 8613816583346