



12V ENGINE START BATTERY

Nanophosphate[®] Lithium Ion

A123's Nanophosphate lithium ion 12V Engine Start Battery sets a new performance standard for micro-hybrid vehicle applications by delivering a significant increase in cycle life, charge acceptance and a 50 percent weight reduction as compared to lead acid batteries. A123's advanced chemistry and system design now offers excellent cold temperature performance that is on-par with lead acid, eliminating lead acid's last remaining performance advantage over lithium ion for starter battery applications.

Extensive Cycle Life

A123's Nanophosphate chemistry significantly improves battery life, delivering cycle life that is more than four times longer than comparable lead acid batteries, even at extremely low temperatures. Long life and high reliability substantially defer the need to replace the 12V Engine Start Battery, which improves total cost of ownership over the life of the system.

Dynamic Charge Acceptance

A123's robust 12V battery can accept high rates of charge and capture several times more energy from regenerative braking for improved vehicle fuel economy and reduced emissions. This advantage is sustained over product life and does not suffer the severe performance degradation experienced with lead-acid technologies.

Lighter Weight

A123's 12V system weighs less than half of lead acid equivalents, contributing to increased vehicle fuel economy and performance.

Cold Temperature Performance

A123's breakthrough lithium ion chemistry now delivers a wider temperature operating range for excellent cold crank performance that is on par with lead acid, which also contributes to long battery life and system reliability.



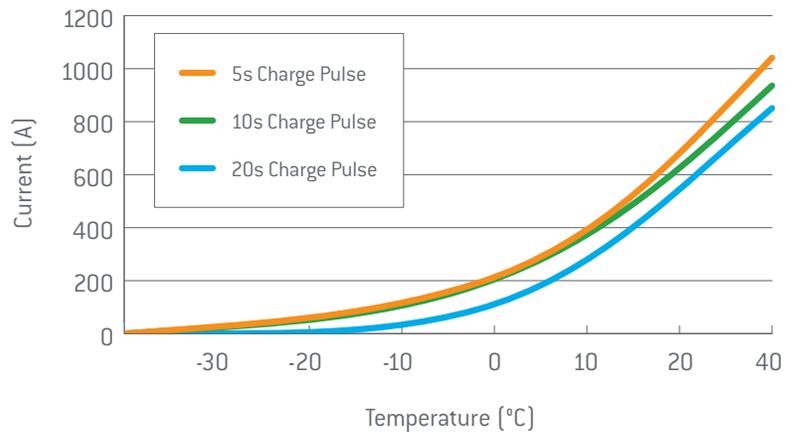
Reliability

Smart on-board battery management system (BMS) electronics report real-time data and diagnostics to protect the battery and prevent premature failures, reducing service and warranty costs. The integrated BMS provides cell balancing and protection as well as built-in system-level safety features for under/over voltage cutoff, overcharge and over temperature protection.

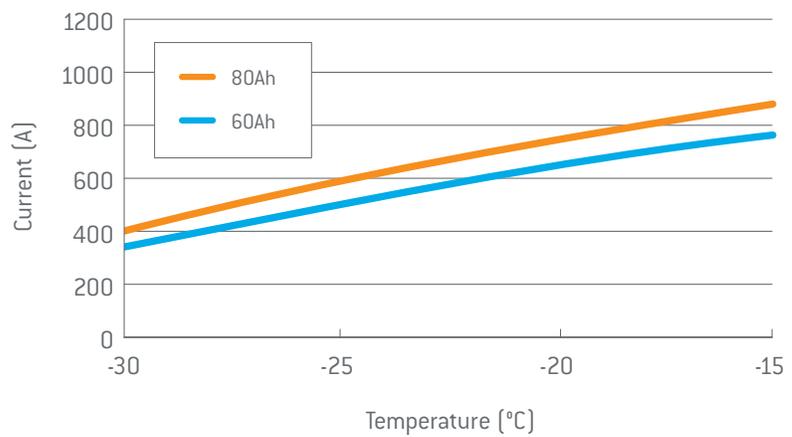
LN4/H7 PRODUCT SPECIFICATIONS

Capacity	60 Ah	80 Ah
Cold Cranking (-18° C)	725 A	830 A
Weight	10 kg	12 kg
Voltage, Nominal	13.2 V	
Operating Temperature	-30° to 50° C	
Storage Temperature	-40° to 60° C	
Dimensions	180 x 314 x 196 mm	

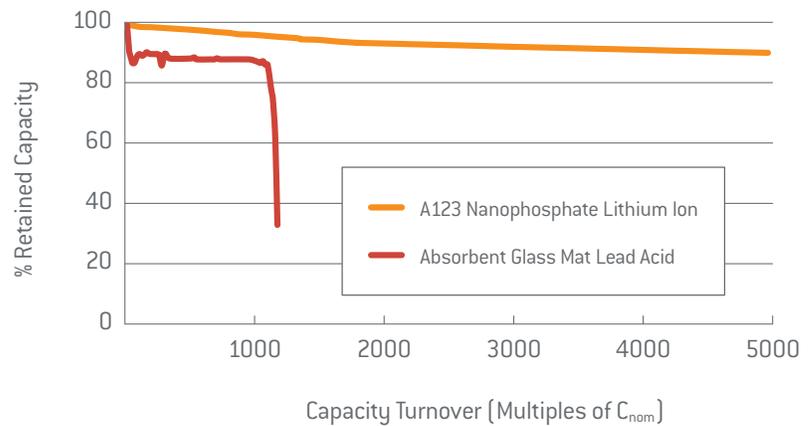
12V/80Ah Dynamic Charge Acceptance



Engine Cold Cranking Performance



Start-Stop Life Cycling



Performance may vary depending on use conditions and application.
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