

# LiFePO<sub>4</sub>

## Next-Gen Lithium-Iron Phosphate Batteries



HIGH ENERGY DENSITY



HIGH THERMAL STABILITY



RECYCLABLE

## THE HEART OF ENERGY STORAGE NTL BATTERIES

## BATTERY DEVELOPMENT + MANUFACTURING IN INDIA

**Nash Tech Labs** in collaboration with its Japanese partner brings to India the very latest in battery technology - **The Lithium-Iron phosphate batteries (LiFePO<sub>4</sub>)** to replace conventional Lithium-Ion batteries.

These batteries have **high thermal Resistance properties** and have no reaction for nail punch through condition.

Carbon special material mixing reduces the internal resistance, reducing battery temperature, and **improves gravimetric and volumetric energy density.**

### PRactical APPLICATIONS PHASE 1



EV Two-wheelers  
24V, 30V, 48V & 72V



Batteries for databanks  
24V & 48V

















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### PRODUCT SPECIFICATION

#### LiFe PO<sub>4</sub>-Prismatic Cell Model (80 Ah)

<b>BATTERY CHEMISTRY</b>  Lithium Ferro Phosphate LiFePO <sub>4</sub>	<b>GRAVIMETRIC ENERGY DENSITY</b>  170 Wh/kg (upto 200 Wh/kg)	<b>VOLUMETRIC ENERGY DENSITY</b>  350 Wh/L (upto 400 Wh/L)	<b>CAPACITY</b>  80 Ah	<b>RATED VOLTAGE</b>  3.20 V	<b>O. C. V</b>  3.00-3.35V	<b>CELL IMPEDANCE</b>  ≤1.0mΩ(3.35V AC 1KHz measured)
<b>CHARGE ENDING VOLTAGE</b>  3.65±0.05V	<b>DISCHARGE ENDING VOLTAGE</b>  2.50 V	<b>CHARGING CURRENT</b>  1C (upto 40C)	<b>DISCHARGE CURRENT</b>  3C (upto 40C)	<b>OPERATING ENVIRONMENT</b>  Charging: 0C-55C, 65%±25%RH, Discharging: -20C~+55C, 65%±25%RH	<b>LIFE CYCLE</b>  5000 Cycles	<b>DIMENSION WEIGHT</b>  L - 180mm, W - 148mm, T - 27.0mm (max) W - 1560 g

### COMPARISON WITH conventional LI-ION batteries

**Safety** - Compared to conventional batteries, the battery characteristics other than the damaged part are maintained, reducing the risk of heat generation temperature, ignition, and explosion. The function of the battery can be maintained even after a part of it is shorted.

**Durability** - Compared to conventional batteries, the problem of leakage, current and aging has been improved, and long-term use in units of several years is possible, upto 10,000 cycles for ESS.

#### SALIENT FEATURES

- Fast charging battery
- Long life battery
- Powerful; large output battery
- Low risk of heat generation
- Low risk of explosion on damage
- Stable performance under the high and low temperature
- Recyclable

#### SOLUTIONS

- Saving charging time
- Battery life extended
- Prevent the risk of heat generation, ignition, and explosion
- Competitive price with better energy density in comparison with similar LFP cells available in market today.
- Excellent performance under high and low temperature
- Risks of material procurement on using rare metal is avoided
- Causes environmental problems at the time of disposal is avoided



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## Next-Gen Lithium-Iron Phosphate Batteries



WE ARE ALSO WORKING ON  
NEXTGEN SOLID STATE BATTERY  
DEVELOPMENT

Mass Production Line  
Ready 2025



### TESTS AND CERTIFICATIONS

UN 38.3 IEC/EN 62133, UL 62133, CSA E62133, UL 1642, UL 2054, UL 2271, and UL 2272 IEC/EN 60950-1, IEC/EN 60335-2-29, UL 1310, UL 1012, UL 2575, UL 60950-1, CSA 22.2 #107.2, CSA 22.2#223, CSA E60335-2-29 and CSA 60950-1. FCC 47CFR Part 15; ICES-003 and to EU: EMC Directive 2014/30/EU.

**EV Four Wheelers**



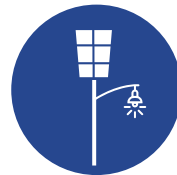
**EV Two Wheelers**



**EV Rickshaws**



**Solar Lighting**



**Telecom**



**Electric Wheelchairs**



**Defence Products**



**Electric Agricultural Equipment**



**Medical Devices**



**Emergency Lighting**



**Point of Sale Products**



**Energy Storage System (ESS)**



### ABOUT NASH TECH LABS

Established in the year 1971, NASH group has evolved into a strong manufacturing solutions provider with capabilities of Design, Precision Sheet Metal Stamping, Fabrication and Assemblies.

We partner with industry leaders for design, manufacture & assembling Industrial products and solutions by adopting innovative and state of the art manufacturing technologies, systems and processes that are reliable, cost effective and functional.

