

# UPS/INVERTER " LITHIUM-INBUILT "



Spinoff Technopark Ltd, Chandigarh, your trusted manufacturers & sellers of High quality & Performance LED lights, introduce its smart product range of Lithium Ion UPS/ Inverter Series for wall mounted/ table top options

**This Product Comes with a 5 Year comprehensive Warranty (Inverter+Lion Battery)**

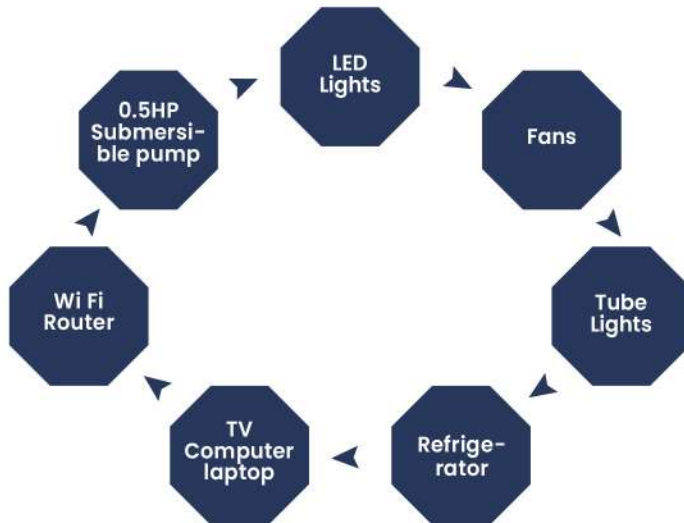
## Add Elegance to your Home

### Key Features of the Product

- Features LiFePO<sub>4</sub>/ Lithium-ion battery for extended lifespan of more than 10 to 12 years.
- No acid-related hazards, Clean and hassle-free backup solution.
- The Pure Sine Wave output provides a pure, clean, and uninterrupted power supply, ensuring optimal performance and longevity of modern electrical appliances
- Cutting-edge DSP and ASIC technology, Finike inverter sets new industry standard for safety and efficiency.
- Equipped with advanced Battery Management System (BMS) for Automatic Low Battery (LBCO) & High Battery Cut-out (HBCO) protection, ensuring enhanced safety and extended battery life.
- Integrated Dual Display (LCD and LED) for enhanced visual experience.
- Modes of different colour illumination on the LED panels gives you the status of the Power ( On Grid/ on UPS/Charging), from a distance.
- UPS mode provides a stable voltage output with minimal fluctuations, which helps protect sensitive electrical appliances. e.g your computer or TV panel will "Never Switch off " when the power switches from Grid power to UPS/ Inverter Power.
- Designed for portability and convenience, with a simple & easy installation process. Lightweight of the compact unit makes it easy to port from one location to another.
- Environment conscious design with low power consumption.
- Budget friendly option with fast & efficient 25 Amp charging.
- Inbuilt protection against Overload, Short Circuit, Low Battery, Overheating, Wiring Faults, and Mains Fuse tripping. High on Safety standards
- Zero Maintenance UPS/ Inverter as no water topping requirement and no cleaning battery terminals.
- Back up " ( 1100 VA- 1280 Wh (12 V /100 Ah ) , (1100 VA -2400 Wh( 24V/100 Ah) Inbuilt Lithium Battery 100%"



## Applications



### All Type of Electrical Appliance like :

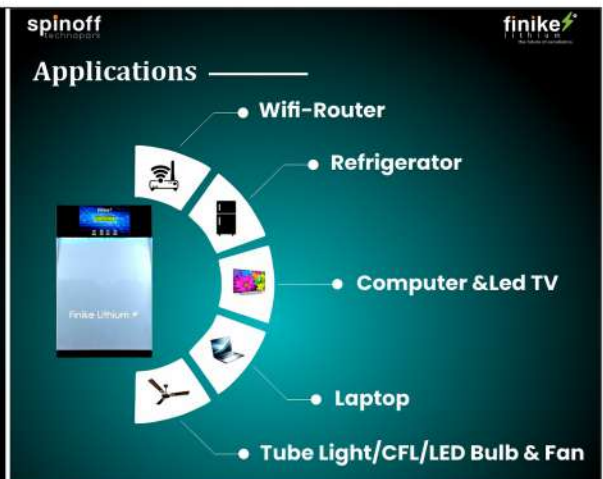
- Led Lights
- Fans
- Tube Lights
- Refrigerator
- TV/ Computer/ Laptop
- Wi Fi Router
- Small 0.5HP submersible Pump
- Other small Appliances

- Backup will Depend primarily on the Load during the UPS/ Inverter Mode.
- 2 Lights/ 2 Fans will give a backup of 10 hours (1100 VA) and 16-18 hours (2100 VA)
- As we draw more load on the UPS / Inverter Mode, the back-up time will reduce.

### For a Normal Household application the back up time would be as follows :

**WHY CHOOSE** \_\_\_\_\_  
LITHIUM ION BATTERY INVERTER OVER LEAD ACID INVERTER BATTERY?

Features	Lead Acid Battery	Lithium Battery
Battery Life	3-5 Years	10-12 Years
Charging Time	10-12Hrs	3-4Hrs
Fumes, Acid Spills	Yes	No
Maintenance	Water Topping Requirement, Cleaning Battery Terminals	Maintenance-free
Ah Capacity	150Ah	100Ah
Charging Cost	3 (Times)	1 (Time)
Cost Efficiency	Replacement After 3-5 years	Replacement After 10-12 years



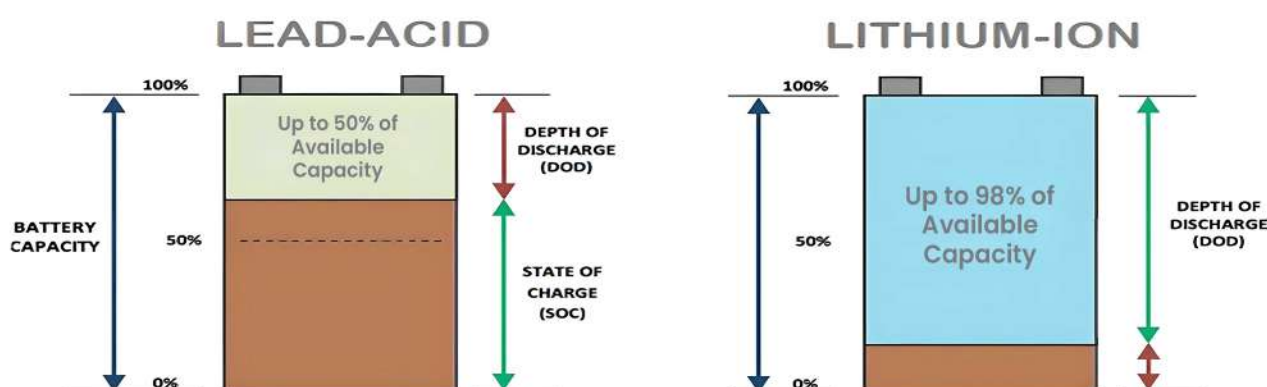
**UPS CUM INVERTER BUYING GUIDE**

Home Type	Appliances Type	Finike Lithium 1100VA
1-2 BHK	2-fans, 2tube light, 3-led (9W), 1-TV, 1-Laptop+ Wi-Fi Router	3 to 4 hours
2-3 BHK	3-fans, 3tube light, 3-led (9W), 1-TV, 1-Laptop+ Wi-Fi Router	2 to 3 hours
2-3 BHK	3-fans, 3tube light, 3-led (9W), 1-TV, 1-Laptop+ Wi-Fi Router	1 to 2 hours



# Advantages of Lithium-Ion Battery

## Lithium-Ion battery structure vs Lead acid battery structure differences and which is better



## The Materials Used

Both Lithium-ion and Lead-acid batteries work on the same principle. The primary difference lies in the material used as cathode, anode, and electrolyte. In a lead-acid battery, lead is used as the anode, and lead oxide is used as a cathode. In a lithium-ion battery, carbon is used as the anode, and lithium oxide is used as the cathode. Lead-acid batteries use **Sulphuric Acid** as an electrolyte, and li-ion batteries use **Lithium Salt** as an electrolyte.

## 1. Depth of Discharge

**The Conventional Lead Acid Battery** once Charged for an average Lead acid Battery can be used averagely up to 50% of the capacity if the battery is discharged more than 50%, the attached inverter will not be able to charge it back, it will need to be charged at an outside High charging facility of the supplier, this leads to Battery cells getting damaged & reduces the life of the battery further.

**In case of Lithium Ion Battery**, once Charged can be used up to 98% of the capacity & the inverter inbuilt with the battery is able to charge it faster with NO hassles at all

## 2. Life Cycle

Life Cycle of a Battery is termed to be one complete Charge & Discharge of the Battery.

In case the Battery is used daily with an average of 2 days, The battery undergoes one life cycle.

**Lead Acid Battery**: Life cycle varies from 400-500 Life cycles, it means the battery life of a lead acid battery typically varies between 3-5 years, beyond which the battery needs to be replaced.

**Lithium Ion Battery**: The average life cycle of the Lithium Ion Battery up to 3500 Cycles, which means this Battery will run for a minimum of 10-12 years.

In a Nut shell, one Lithium Ion Battery has 3 or more times life than a traditional lead acid Battery.

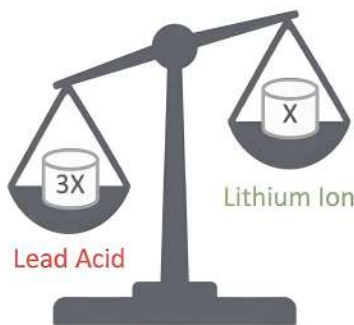


# Financial Advantage of Lithium Ion Battery over Lead Acid Battery

Battery Type	Price(Rs)	Life Cycle	Day term in 30days (Full Use)	Life in Years	Per Year cost(Rs)
Lead Acid 150 Ah	18,000/-	300-500Cycles	500	3Years	6000/-
Lithium Ion 100 Ah	25000/-	3500Cycles	3500	10-12Years	2000/-

## 3. Battery & Inverter Weight

Lead Acid Battery Inverters are normally 3-4times heavier than a Lithium Battery Inverter hence it is easier to move or relocate it.



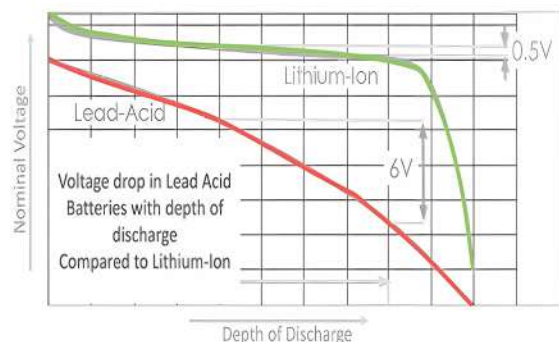
**1100VA Inverter with 150Ah Lead acid Battery: 65-70Kg appx.**

(it can vary with make. Size of battery & the inverter)

**Finike Lithium 1100VA Inverter with Inbuilt Battery: 25Kg appx.**

## 4. Voltage Fluctuation

Lithium-ion batteries maintain a stable voltage output regardless of the power drawn from them and depth of discharge. On the other hand, Lead Acid batteries exhibit voltage fluctuations that are dependent on the output load. This feature makes Lithium-ion batteries more reliable for applications that require a consistent power supply, as they can deliver a steady voltage contributing to the overall stability and performance of the system they power.



## 5. Charging Time

Lithium-ion batteries have a significant advantage when it comes to charging time. They can be charged to full capacity in approximately 3-4 hours, whereas Lead Acid batteries typically require 10 to 12 hours for a complete charge. The faster charging capability of Lithium-ion batteries adds to their convenience and suitability for applications that demand quick turnaround times.



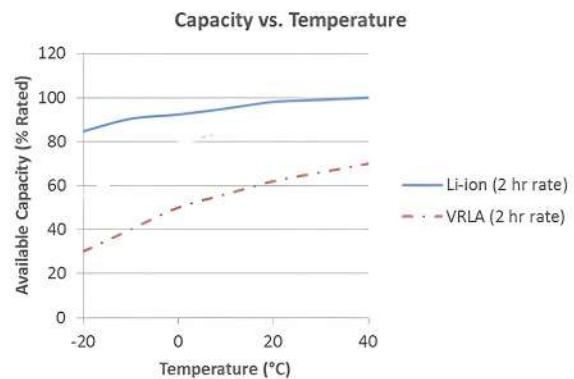
Lithium Ion  
4Hours



Lead Acid  
12Hours

## 6. Temperature Stability

Lithium Ion Batteries can operate at its full efficiency between -20 Degree to +70 Degree Centigrade of Temperature, whereas a Lead acid battery performance starts falling at very high or low temperatures.



## 7. Environmental Impact

From an environmental perspective, **Lithium-ion batteries** have a distinct advantage over Lead Acid batteries. Lithium-ion batteries conform to the **RoHS (Restriction of Hazardous Substances)** standard, ensuring they are free from hazardous materials. In contrast,

**Lead Acid batteries violate** the RoHS standard due to the **presence of lead and sulfuric acid, both of which are pollutants.**

Moreover, Lithium-ion batteries are generally considered non hazardous waste, whereas Lead Acid batteries require specialized recycling due to their harmful components.

**Additionally, due to higher number of cycles in Lithium Ion, the net environmental impact is lower.**

## Conclusion

This detailed comparison between Lithium-ion and Lead Acid batteries clearly reveals the numerous advantages of Lithium-ion technology. Its high energy density, compact size, low weight, stable voltage output, extended cycle life, minimal capacity loss with high output currents, deep discharge capability, faster charging time, temperature stability, and environmentally friendly nature make Lithium-ion batteries the preferred choice for a wide range of applications. As technology continues to advance, Lithium-ion batteries are poised to revolutionize the energy storage landscape powering the future of transportation, renewable energy and beyond.

All Energy Intelligent power backup products are built using Lithium Ion Batteries.