

# Why Choose LiFePO4?



**LiFePO4 stands for lithium iron phosphate, and it is a type of rechargeable battery.**

**LiFePO4**



One of the most significant advantages of LiFePO4 batteries is the safety aspect. They are inherently more stable and less prone to thermal runaway, overheating, or catching fire compared to other lithium-ion chemistries. This makes them a preferred choice in applications where safety is a top priority.

LiFePO4 batteries typically have a longer cycle life. They can endure a higher number of charge-discharge cycles, making them suitable for long-term use.

**Below we have listed some comparisons to NiCD and NiMH batteries.**

**LONGER  
LIFE  
CYCLE**

**ENHANCED  
SAFETY  
PROFILE**

**LOW SELF-  
DISCHARGE  
RATE**

**FAST  
CHARGING  
CAPABILITY**

**ENVIRON-  
MENTALLY  
FRIENDLY**

**STABLE &  
CONSISTENT  
VOLTAGE**

## LITHIUM IRON PHOSPHATE (LiFePO4)

### ENERGY DENSITY

Generally has a higher energy density compared to NiCD and NiMH batteries. This means it can store more energy per unit of weight.

### CYCLE LIFE

Typically has a longer cycle life than NiCD and NiMH batteries. LiFePO4 can endure a higher number of charge-discharge cycles.

### ENVIRONMENTAL IMPACT

Considered more environmentally friendly than NiCD due to the absence of toxic cadmium.

## NICKEL CADMIUM (NiCD)

### ENERGY DENSITY

Have a lower energy density compared to many modern rechargeable batteries, especially when compared to LiFePO4.

### CYCLE LIFE

NiCD batteries have a reasonably good cycle life, they have, however, become less popular in recent years due to environmental concerns related to the use of cadmium.

### ENVIRONMENTAL IMPACT

Contains toxic cadmium, a toxic heavy metal which raises environmental concerns.

## NICKEL METAL HYDRIDE (NiMH)

### ENERGY DENSITY

Generally have higher energy density compared to NiCD batteries but still lower than LiFePO4.

### CYCLE LIFE

NiMH batteries are known for having a moderate cycle life, shorter than the LiFePO4.

### ENVIRONMENTAL IMPACT

Generally considered more environmentally friendly than NiCD but not as much as LiFePO4.

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