

Environmental Friendly

Fast Recharge

Eight Times the Lifespan

Light Weight

Extreme High Power Density



LITHIUM IRON BATTERY FOR FORKLIFT TRUCK

Power for Life

Lithium Iron Battery

LTE 48V Series for Forklift Truck



LiFe Power Technology Co. Ltd. is a true leader in lithium iron energy storage solutions. Innovation is inherent to everything we do. The company has transform the knowledge with applications which use traditional lead acid battery and to introduce the lithium iron solutions, the first solution of its kind in the world. And it is the leader in providing safe high volume products.

The first lead acid battery was designed more than 150 years ago and has barely changed since then. Even though other lead acid technology has been developed, but the improvement has been limited. And this is the reason why we introduce the new lithium iron technology.

Lithium Iron technology

Lithium cobalt battery is known to provide power to smaller devices such as cell phone, notebooks and PDA. However, due to its volatility nature, for safety reason, it is restricted for devices require only low-rate discharge. And unlike the lithium cobalt battery, the LiFe Power Technology took the weight and size advantage of lithium cobalt battery and uses lithium iron compound to developed the first ever high capacity Lithium Iron battery and which provides extreme safe high-rate performance, long life and cost effective energy storage solutions for our customers.

Performance

In comparison to traditional lead acid battery it has:

- Shorter charge times. It can be fully charged within 3 hours or faster depends on the method of high C rate charging
- More power then a lead acid battery in the same weight. Lithium Iron battery only has 1/2 of the weight compare to the lead acid battery with the same capacity
- Longer lifespan, high cycles, over 3,800 cycles @ 75%DOD @ 25°C

Environmental Friendly

No heavy metal and poison substance. Materials being used in this battery is 100% un-harmful to the environment.

Lithium Iron Battery

LTE-48V400-M

Installation

A lithium iron battery is smaller than the equivalent lead acid battery, and it is almost 30% smaller in volume. makes it fast to install.

Versatility

The LTE-48V 50 Ah module can be connected in parallel (6~8) for application with bigger capacity requirement, and reduce maintenance labor cost and material cost.

Attractive and Functional

The design of the battery terminal is the same as the traditional lead acid battery design (SB or DIN), makes it easy to replace.

High Rate Charge

The LiFe Power Battery allows high rate charge in 3 hour, increase 30~50% run time.

Cycle Life

The LiFe Power Battery is equipped with the "Smart Cell Balancing" battery management system which helps lithium iron cells to extend it's cycle life. The cycle life is up to 8 times more than comparable lead acid battery.

Light Weight

The Lithium iron battery weighing only $\frac{1}{4}$ of the comparable lead acid battery. Which also make it easy to install.

TrustWave CMS

To manage modules and record battery usage information and drive OLED display



Safety

The lithium iron battery is equipped with "Smart Cell Balancing" battery management system, which allows:

- Safety during charging and discharging
- Longer lifespan
- Voltage, current and temperature control



Lithium Iron Battery

LTE-48V400-M Specification

SPECIFICATION	LTE-48V50-S (module)	LTE-48V400-M1 (with CMS)	LTE-48V400-M2 (with CMS)
Nominal Voltage	48V	48V	48V
Nominal Capacity(C/5@25°C)	50Ah	400Ah	400Ah
Internal impedance (1kHz AC)@25°C	≤20mΩ	≤3 mΩ	≤3 mΩ
Weight (kg)	< 33 kg	< 280 kg	< 280 kg
Dimension (L*W*H mm)	230*175*558	881*323*600	641*443*600
Specific Energy (Cell)	121Wh/kg		
Max. discharge@25°C(1 min)	100A	800A	800A
Max. pulse discharge@25°C	120A	1000A	1000A
Discharge cut-off voltage@25°C	40V	40V	40V
Charge Current	20A/Max. 50A	100A/Max. 200A	100A/Max. 200A
Charge Voltage	58.4V ± 0.2V	58.4V ± 0.2V	58.4V ± 0.2V
Cycle life at C/2 discharge, 75%DOD@25°C	3800	3800	3800
Cycle life at 1C discharge, 20%DOD@25°C	12000	12000	12000
Discharge temperature range	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C
Charge temperature range	0°C to 55°C	0°C to 55°C	0°C to 55°C
Storage temperature range	-40°C to 55°C	-40°C to 55°C	-40°C to 55°C

•Environment temperature range 0~40°C, and above 25°C can have effect on lifespan/cycle life

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Lithium Iron Battery

LTE-48V400FS

Installation

A lithium iron battery is smaller than the equivalent lead acid battery, and it is almost 50% smaller in volume. makes it fast to install.

Integral Design

Easy to replace Lead Acid Battery Module and no longer needed watering or maintain.

Attractive and Functional

The design of the battery terminal is the same as the traditional lead acid battery design (SB or DIN), makes it easy to replace.

High Rate Charge

The LiFe Power Battery allows high rate charge in 1 hour, increase 30~50% run time.

High Cycle Life

The LiFe Power Battery is equipped with the "Smart Cell Balancing" battery management system which helps lithium iron cells to extend it's cycle life. The cycle life is up to 8 times more than comparable lead acid battery.

Light Weight

The Lithium iron battery weighing only $\frac{1}{4}$ of the comparable lead acid battery. Which also make it easy to install.

Safety

The lithium iron battery is equipped with "Smart Cell Balancing" battery management system, which allows:

- Safety during charging and discharging
- Longer lifespan
- Voltage, current and temperature control

Battery Information Display

Built-in 5 levels LED capacity indicator, and buzzer for notification.

(Optional) High brightness external OLED display is a convenience interface for operator.



LTE-48VxxxFS Specification

SPECIFICATION	LTE-48V200FS	LTE-48V300FS	LTE-48V400FS
Nominal Voltage	48V	48V	48V
Nominal Capacity(C/5@25°C)	200Ah	300Ah	400Ah
Internal impedance (1kHz AC)@25°C	≤ 5 mΩ	≤ 3 mΩ	≤ 2 mΩ
Weight (kg) approx.	200 kg	245 kg	280 kg
Dimension (L*W*H mm)	630*380*370	630*380*450	630*380*570
Specific Energy (Cell)	121 wh/kg	121 wh/kg	121 wh/kg
Max. discharge@25°C (1min)	600A	900A	1200A
Max. pulse discharge@25°C (2s)	800A	1200A	1600A
Discharge cut-off voltage@25°C	45V	45V	45V
Charge Current	100A/Max. 150A	100A/Max. 200A	100A/Max. 250A
Charge Voltage	58.4V ± 0.2V	58.4V ± 0.2V	58.4V ± 0.2V
Cycle life at C/2 discharge, 75%DOD@25°C	3800	3800	3800
Cycle life at 1C discharge, 20%DOD@25°C	12000	12000	12000
Discharge temperature range	-20°C to 75°C	-20°C to 75°C	-20°C to 75°C
Charge temperature range	0°C to 55°C	0°C to 55°C	0°C to 55°C
Storage temperature range	-40°C to 55°C	-40°C to 55°C	-40°C to 55°C

•Environment temperature range 0~40°C, and above 25°C can have effect on lifespan/cycle life

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