



INDUSTRIAL LITHIUM-ION BATTERIES

LIM50E MODULE



LIM50E-7G



LIM50E-8G

ADVANCED BATTERY SOLUTIONS FOR CRITICAL INDUSTRIAL DEMANDS

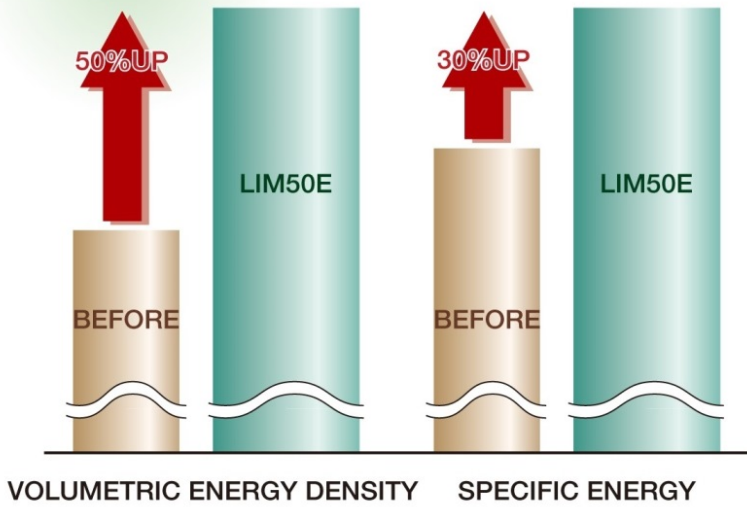
- SMART GRID
- ENERGY STORAGE SYSTEM
- INDUSTRIAL POWER SUPPLY SYSTEM
- UPS
- TELECOMMUNICATIONS
- INDUSTRIAL ELECTRIC VEHICLE

GS Yuasa's heritage in large format Lithium-ion stretches back to the early 90's. The LIM50E modules incorporate GS Yuasa's unique advanced battery technologies, experience, manufacturing expertise and commitment to quality.

CHARACTERISTICS

HIGH ENERGY DENSITY

- Compact and light weight.



HIGH RELIABILITY

- GS Yuasa has manufactured large format Li-ion cells for more than a decade.
- Integrated battery monitoring unit communicates module status to guarantee system safety and dependability.

ROBUST BATTERY MANAGEMENT SYSTEM

- An optional touch-screen display allows users to monitor battery system details.

Battery voltage	500.0V	Data	Cell voltage
Battery current	10.0A		Module temperature
State of charge(SOC)	30.0%		Status
Battery average temperature	20.0°C	Alarm	Current abnormality
Maximum cell voltage	3.787V		History
Average cell voltage	3.600V		Test mode
Minimum cell voltage	3.543V		Setting
Number of module	18		

Touch screen user interface.

SPECIFICATION

	LIM50E-7G	LIM50E-8G
Nominal capacity	47.5 Ah	47.5 Ah
Nominal voltage	25.9V	29.6V
External dimensions	W×L×H = 180×412×135 mm	W×L×H = 215×414×135 mm
Mass	15.0kg	17.5kg
Maximum discharge current	300A	300A
Maximum charge current	125A	125A
Operating temperature	-10~45°C	-10~45°C
Monitoring system	<ul style="list-style-type: none"> ● Monitor individual cell voltage ● Monitor module temperature ● Report overcharge, over discharge, abnormal temperature ● Perform cell balancing ● CAN 2.0 and RS485 with optional LIBM 	



AWARDED JAPANESE QUALITY RECOGNITION BY POWER SYSTEM GROUP IN 2008



Kyoto factory: ISO14001 certified Dec 24, 1997



ISO9001 certified JQA-1397

Authorized Distributor



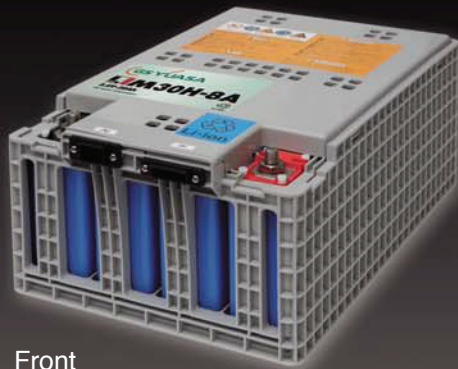
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Lithium ion battery for Industrial use LIM series



Front



Back

Overview

The LIM series, lithium-ion rechargeable battery for industrial applications, has been developed based on our state of the art technology and extensive experience in manufacturing small lithium-ion and large-scale industrial batteries. As a high energy and power source, the LIM series is your answer for long life in a compact size for most industrial applications.

Applications

- Hybrid crane systems
- Hybrid train
- Hybrid vehicle
- AGV(Automated Guided Vehicle)
- Power storage system for railway
- Load leveling systems
- Other industrial systems

Features and Benefits

- High charge / discharge power density
- Sealed structure
- No memory effect
- Easy periodical check
- Outstanding cycle life
- Fan-forced air cooling control with thermal sensor
- Integrated module design

Specifications

Model	Cell Qty	Charge Voltage (V)	Dimensions(mm)			Mass (Kg)	Maximum Charge Current(A)	Maximum Discharge Current(A)
			Length	Width	Height			
LIM30H-8A	8	28.8	414	231	147	19.5	600 (20C)	600 (20C)

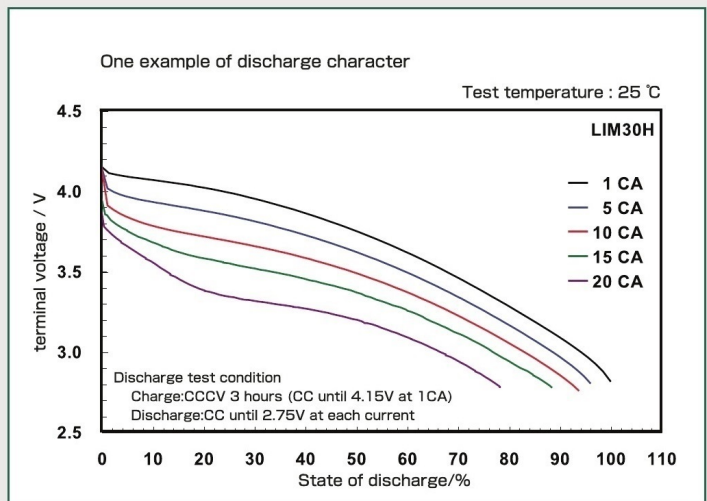
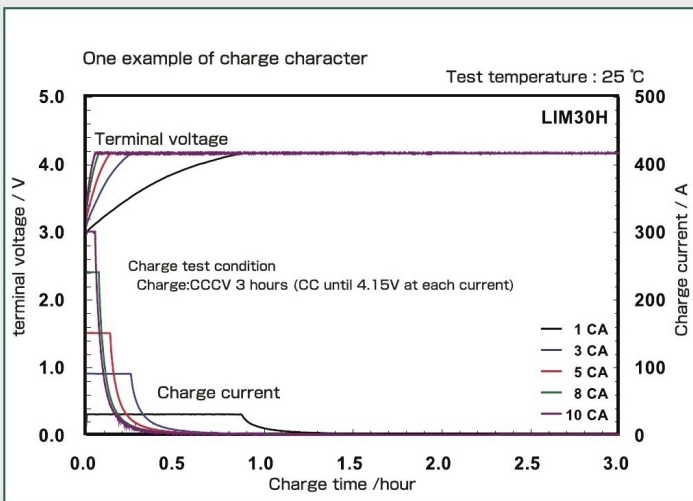
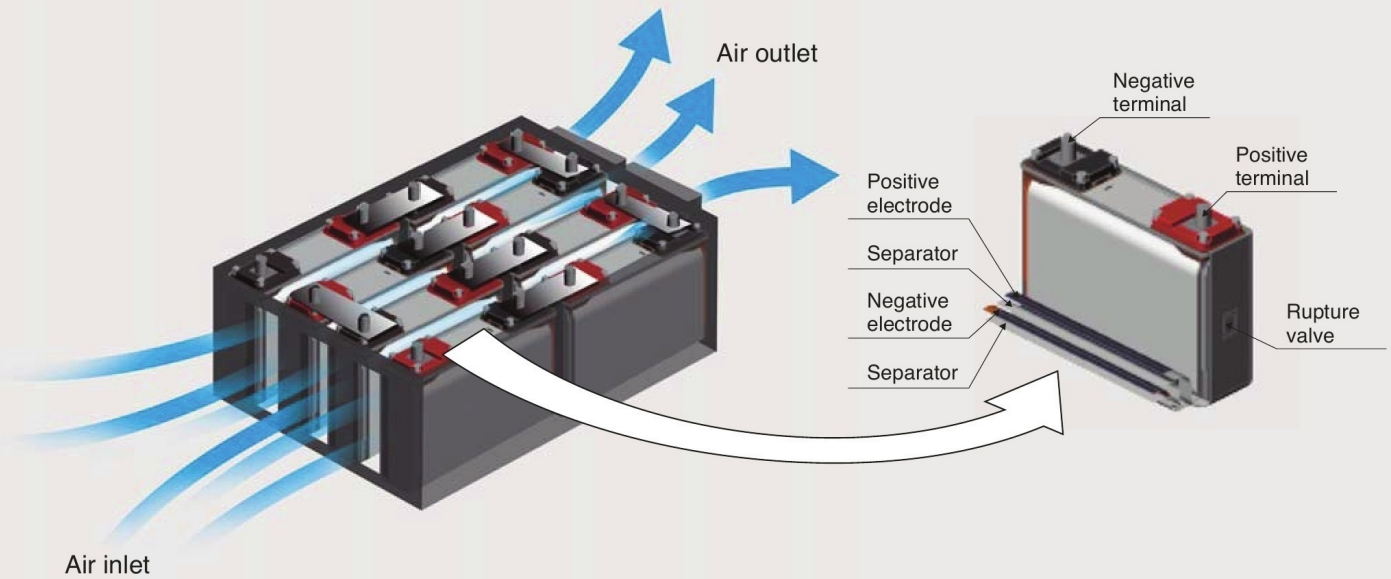
Charge temperature (°C) : 0 ~45 Discharge temperature (°C) : 0 ~45

Monitoring system

Items	Functions	Items	Functions
Voltage monitoring	Each cell voltage is monitored.	Alarm signals	Overvoltage,Undervoltage,
Temperature monitoring	Each module temperature is monitored.		High temperature,Low temperature
Status signals	Voltage rise,Voltage fall,Fan operation	Balancer	Voltage difference between each cell is controlled.

Structure of Battery Module

Structure of a single cell



Safety and protection of Lithium Ion battery

GS Yuasa LIM modules are equipped with protective functions that can detect overcharge, overdischarge, high temperature and other abnormal operating conditions. The LIM modules must be operated with a dedicated charger that can monitor the LIM battery management signals and automatically terminate charging or discharging.



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