



Li BATTERY SPECIFICATION

Code	P25451-36
Reference	Batería Litio 50Ah 12VDC

1. Scope

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2. Description and Model

2.1 Description	Lithium iron phosphate battery
2.2 P25451-36	Batería Litio 50Ah 12VDC

3. Product Specification

No.	Item	General Parameter	Remark
1	Rated Capacity	(Typ.) 50Ah	Standard charge and Standard discharge
		(Min.) 49Ah	
2	Nominal Voltage	12.8V	
3	End of Charge Voltage	14.6V	
4	Charge mode	CC, CV	
5	Charging cut-off current	0.02C	
6	Charging time	5-6h	
7	Over-Charge Voltage Protection (cell)	3.9V	
8	Max continuous charge current	10A	
9	Maximum Continuous Discharging Current	10A	

4. Performance And Test Conditions

● Standard Test Conditions

test and measurement shall be done under temperature of $25\pm 5^{\circ}\text{C}$ and relative humidity of 45~48%.

● Measuring Instrument or Apparatus

① Dimension Measuring Instrument

The dimension measurement shall be implemented by instruments with equal or more precision scale of 0.1mm.

② Voltmeter

Standard class specified in the national standard or more sensitive class having inner impedance more than $10\text{k}\Omega/\text{V}$.

③ Ammeter

Standard class specified in the national standard or more sensitive class. Total external resistance including ammeter and wire is less than 0.01Ω .

④ Impedance Meter

Impedance shall be measured by a sinusoidal alternating current method (1kHz LCR meter)

● Standard Charge/Discharge

① Standard charge: Test procedure and its criteria are referred as follows:

0.2 C=Charging shall consist of charging at a 0.2 C constant current rate until the cell reaches 14.6V The cell shall then be charged at constant voltage of 14.6v when the charging current has tapered to 0.02 C. Charge time: Approx 5-6h,

② Standard Discharge

0.2C=Cells shall be discharged at a constant current of 0.2C to 8 volts @ $25^{\circ}\text{C}\pm 5^{\circ}\text{C}$.

③ If no otherwise specified, the rest time between Charge and Discharge amount to 30min.

● Appearance

There shall be no such defect as flaw, crack, rust, leakage, which may adversely affect commercial value of battery.

5. Warning

● Prohibition short circuit

● Notice for Designing Battery Pack

Pack toughness

Mottcell reserves the right to modify product specification and data stated here without prior notice.

Battery pack should have sufficient strength and the Li-Fe cell inside should be protected from mechanical shocks.

Cell fixing

The Li-Fe cell should be fixed to the battery pack by its large surface area.

No cell movement in the battery pack should be allowed.

Tab connection

Spot welding is recommended for Li-Fe tab connection method.

Battery pack should be designed that shear force are not applied to the Li-Fe tabs.

● Prohibition of disassembly

1) Never disassemble the cells

The disassembling may generate internal short circuit in the cell, which may cause gassing, firing, explosion, or other problems.

2) Electrolyte is harmful

Li-Fe battery should not have liquid from electrolyte flowing, but in case the electrolyte come into contact with the skin, or eyes, physicians shall slush the electrolyte immediately with fresh water and medical advice is to be sought.

● Prohibition of dumping of cells into fire

Never incinerate nor dispose the cells in fire. These may cause explosion of the cells, which is very dangerous and is prohibition.

● Battery cells replacement

The battery replacement shall be done only by either cells supplier or device supplier and never be done by the user.

● Prohibition of use of damaged cells

The cells might be damaged during shipping by shock. If any abnormal features of the cells are found such as damages in a plastic envelop of the cell, deformation of the cell package, smelling of an electrolyte ,an electrolyte leakage and others, the cells shall never be used any more.

The cells with a smell of the electrolyte or a leakage shall be placed away from fire to avoid firing or explosion.

● Period of Warranty

The period of warranty is one year from the date of shipment. Mottcell guarantees to give a replacement in case of cells with defects proven due to manufacturing process instead of the customer abuse and misuse.

● Storing the Batteries

The batteries should be stored at room temperature, charged to about 30% to 50% of capacity. We recommend that batteries be charged about once per half a year to or event over discharge.

● Other The Chemical Reaction

Because batteries utilize a chemical reaction, battery performance over time even if stored for a long period of time without being used. In addition, if the various usage conditions such as charge, ambient temperature, etc. are not maintained within the specified ranges the life expectancy of the battery may be shortened or the device in which the battery is used may be damaged by electrolyte leakage. if the batteries cannot maintain a charge for long periods of time, even when they are charged correctly, this may indicate it is time to change the battery.

● Note:

Any other items which are not covered in this specification shall be agreed by both parties.

SYLVANIA

P25451-36

Batería Litio 50Ah 12VDC

Version: A0

Annex 1 (Product structure diagram)

