

LITHIUM LFP LiFePO4 OT48100 - 100AH/48V



48V100AH

SPECIFICATIONS

- Model: OT48100
- Lithium battery, cell technology: LFP LiFePO4
- Nominal voltage: 48VDC
- Full charge open voltage: 50.2V
- Number of Cells: 15
- Nominal capacity: 100Ah
- Nominal power: 4800 Wh
- Min discharge voltage: 42V
- Max charge voltage: 53V
- Max discharge current: 100A
- Max charge current: 50A
- Recommend charge/Discharge current: 50A
- Battery Internal resistance: $\leq 5.5m\ \Omega \pm 15\%/25^{\circ}C$ as normal condition
- Round trip efficiency (0.2Crt): $\geq 93\%$
- Self discharge ($25^{\circ}C$): $\leq 3\%$ / month
- The cell temperature rising range during charge/discharge: $\leq 20^{\circ}C$
- Communications: RS485 or CAN
- Parallel unit: 15 modules
- Standard installation: 19"
- Dimensions: 480/440*443.5*133mm
- Weight: 42Kg
- Working environment:
 - Temperature $0^{\circ}C \div +55^{\circ}C$ charge, $-10^{\circ}C \div +55^{\circ}C$ discharge
 - Humidity $5 \div 95\%$
- Shelf temperature: $-20^{\circ}C \div +60^{\circ}C$
- Protection standard: IP20
- Comply standards: CE, MSDS, UL1973, IEC62620, IEC62619, JIS C8714, IEC62133, UL2054, UN38.3, EN61000-6-1:2007

- Design life: +10 years
- Cycles life: >6000

Cell Specifications

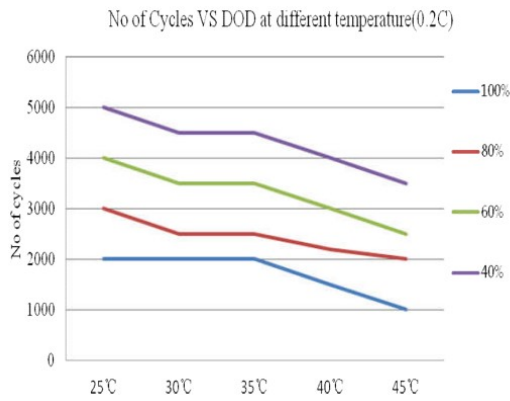
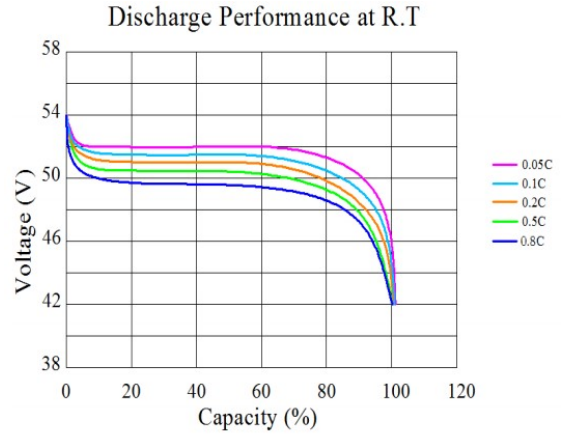
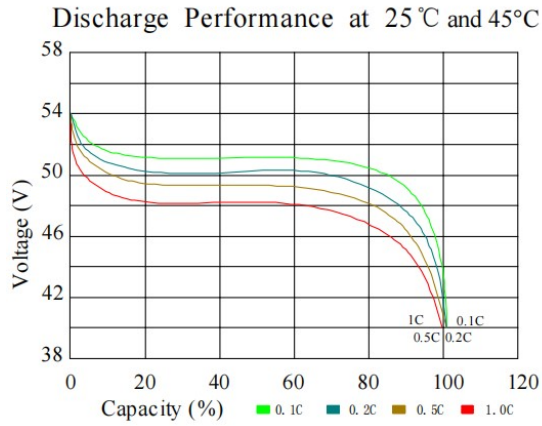
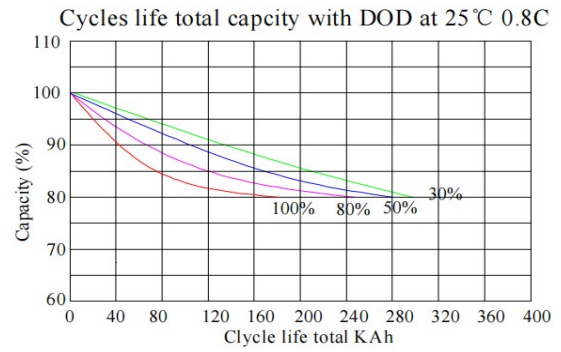
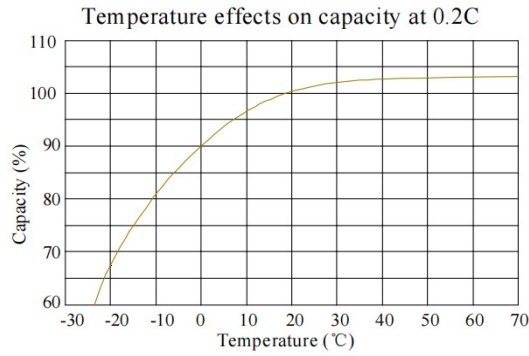
- Nominal capacity: 100Ah
- Nominal voltage: 3.2V
- Full charge open voltage: 3.35V
- Weight: 1985g ±100g
- Cell Internal resistance: ≤ 0.25m Ω ±15% (cell alone), 0.33m Ω ±15% (after welded with aluminum bar)
- Capacity tolerance: ±1%
- Internal resistance tolerance: ±15%
- Open voltage tolerance: ≤ 0.05V
- Final voltage tolerance: ≤ 0.3V
- Dimensions: Terminal Height 118.5 ±0.5mm * Shoulder height 115.7 ±0.5mm * Width 160 ±0.8mm * Thickness 50.1 ±0.5mm

BMS Specifications

- Monitoring: battery voltage, cell voltage, temperature, SOC, SOH, current, Cycles times, Capacity
- Cell voltage resolution: ≤ 1mV
- Battery voltage resolution: ≤ 10mV
- Voltage tolerance: ≤0.5 %
- Current tolerance: ≤ 2%
- Temperature tolerance: ≤ 3°C
- SOC, SOH tolerance: ≤ 5%
- Capacity tolerance: < 5%
- Protections and alarm:
 - Cell and battery Over/lower voltage
 - Overcharge current
 - Over discharge current
 - High and low temperature
 - Short circuit, reverse polarity
- External alarm dry contact:
 - Low cell/module voltage
 - Overcharge current
 - Over discharge current
 - High cell temperature
 - Short circuit, reverse polarity
 - Battery is off
- Battery status, alarm status, error
- Data store upto 500 records and export to PC
- Management Software communicate to PC
- Temperature sensors and monitor

Capacity Table

Capacity with DoD 100%	Discharge Current
≥ 99%Cr _t (25°C)	0.2C
≥ 98%Cr _t (25°C)	0.5C
≥ 96%Cr _t (25°C)	0.8C
≥ 90%Cr _t (45°C)	0.2C



Discharge cycles time with discharge current 0.5C

DoD	Cycles times at 25°C	Cycles times at 30°C	Cycles times at 35°C	Cycles times at 40°C	Cycles times at 45°C
100%	3000	3000	3000	2000	1500
80%	4500	4000	4200	3000	2500
60%	4700	4500	4300	3200	2700
40%	5000	4800	4600	4000	3500

BMS Software management

PbmsTools HS1.0.6 (Protocol code:HS-PACE-232-BP-V1.1)

Realtime Monitoring | Multi Monitoring | Memory Info. | Parameter Setting | System Config. | Export Datas

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Pack Information

Pack Voltage V

Pack Current A

SOC %

SOH %

RemainCapacity mAH

FullCapacity mAH

Battery Cycle

Temperature

MOS_T °C ENV_T °C

Cell Voltage(mV)

MaxVolt MinVolt VoltDiff

Vcell 1	<input type="text"/>	Vcell 9	<input type="text"/>
Vcell 2	<input type="text"/>	Vcell 10	<input type="text"/>
Vcell 3	<input type="text"/>	Vcell 11	<input type="text"/>
Vcell 4	<input type="text"/>	Vcell 12	<input type="text"/>
Vcell 5	<input type="text"/>	Vcell 13	<input type="text"/>
Vcell 6	<input type="text"/>	Vcell 14	<input type="text"/>
Vcell 7	<input type="text"/>	Vcell 15	<input type="text"/>
Vcell 8	<input type="text"/>	Vcell 16	<input type="text"/>

Serial Port

Port Baud Rate 9600 Auto Display

Pack 1 Pack Qty 1 **Open**

ADDR Interval(S) 1 **Try Connect**

System Status

CHARGING-OFF
 CHARGING
 CHG-LIMIT-OFF
 ACin
 DISCHARGING-OFF
 DISCHARGING
 HEATER-OFF
 Fully

Alarm Status

Protect Status

Fault Status

Switch Control

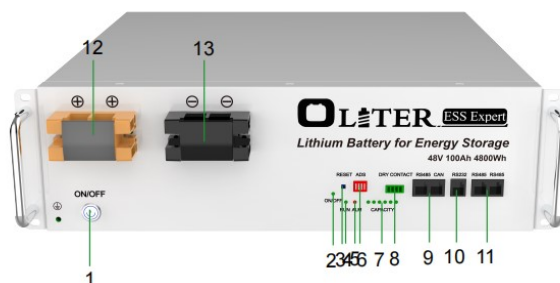
CHG Circuit
 Sound Alarm
 DSG Circuit
 LED Alarm
 Shutdown

Password

VER: | BMS S/N: | PACK S/N: | COMM:

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2023/09/09

Interfaces Connections



Item	Name	Definition
1	Power switch	ON/ OFF, must be in the "ON" state when in use
2	Status indicator	The green light will stay on when the battery the battery starts
3	RESET	Keep pressing for more than 3 seconds, the battery will be restarted
4	RUN	Green light flashing during standby and charging mode. Green light always on when discharging.
5	ALM	Red light flashing when an alarm occurs, red light always on during protection status. After the condition of trigger protection is relieved, it can be automatically closed
6	ADD	DIP switch
7	SOC	The number of green lights shows the remaining power.
8	DRY CONTACT	/
9	CAN/RS485	Communication cascade port, support CAN/ RS485
10	RS232	Communication cascade port, support RS232
11	RS485/RS485	Communication cascade port, support RS485
12	Positive socket	Battery output positive or parallel positive line
13	Negative socket	Battery output negative or parallel negative line