

## LITHIUM LFP LiFePO4 OT48200 - 200AH/48V



**48V200AH**

### SPECIFICATIONS

- Model: OT48200
- Lithium battery, cell technology: LFP LiFePO4
- Nominal voltage: 48VDC
- Full charge open voltage:  $\leq 50.5V \pm 3\%$
- Number of Cells: 15
- Nominal capacity: 200Ah
- Nominal power: 9600Wh
- Min discharge voltage:  $\geq 42V$
- Max charge voltage:  $\leq 54V$
- Max discharge current:  $\leq 160A$
- Max charge current:  $\leq 100A$
- Recommend charge/Discharge current:  $\leq 100A$ , nominal charge/discharge current: 40A (0.2C)
- Battery Internal resistance:  $\leq 5.0m\Omega \pm 15\%$  /25°C as normal condition
- Round trip efficiency (0.2Crt):  $\geq 95\%$
- Self discharge (25°C):  $\leq 3\%$  / month
- The cell temperature rising range during charge/discharge:  $\leq 20^\circ C$
- Communications: 3\*RS485, 1\*RS232, 1\* CAN Ports
- Parallel unit: 15 modules
- Standard installation: 19", 2 handles on the front and 2 handles on the back sides for hand carry
- Dimensions: 440/480L\*602D\*250H  $\pm 2mm$
- Weight: 84Kg  $\pm 3\%$
- 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, GB/T 36276-2018
- Design life: +15 years
- Cycles life: > 6000

## Cell Specifications

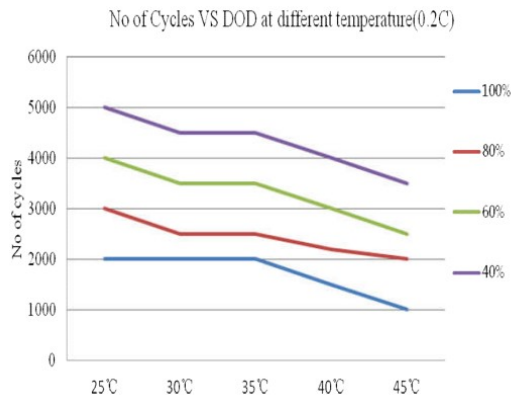
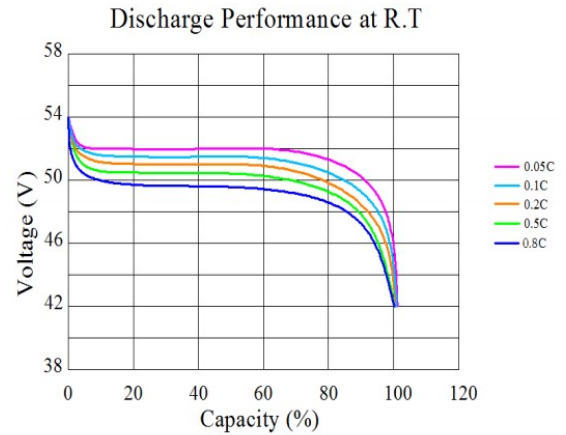
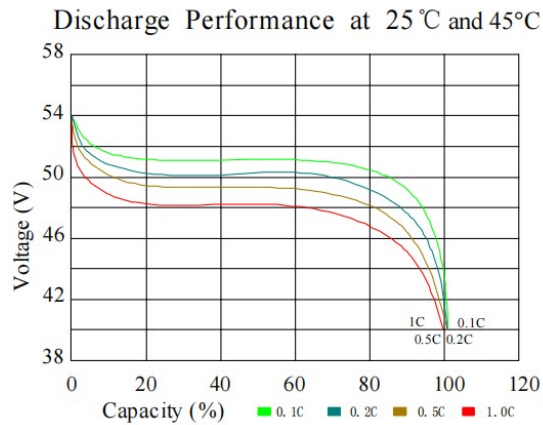
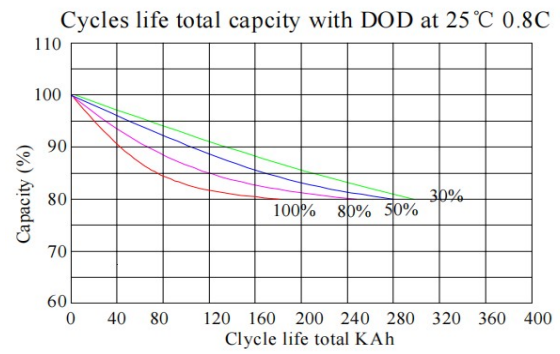
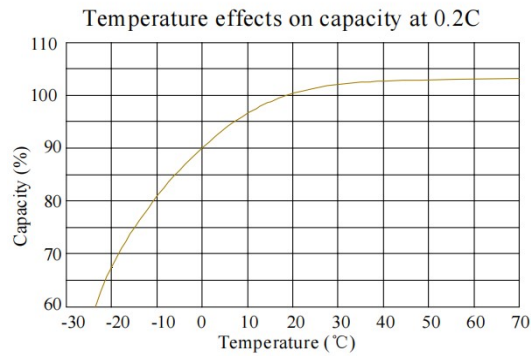
- Nominal capacity: 200Ah
- Nominal voltage: 3.2V
- Full charge open voltage:  $\leq 3.35V \pm 3\%$
- Weight: 4100g  $\pm 150g$
- Cell Internal resistance:  $\leq 0.3m\Omega \pm 15\%$  (cell alone),  $\leq 0.35m\Omega \pm 15\%$  (after welded aluminum bar)
- Capacity tolerance:  $\pm 1\%$
- Internal resistance tolerance:  $\pm 15\%$
- Open voltage tolerance:  $\leq 0.05V$
- Final voltage tolerance:  $\leq 0.3V$
- Dimensions: Terminal Height 207.1  $\pm 0.5mm$  \* Shoulder height 204.4  $\pm 0.5mm$  \* Width 174.2  $\pm 0.8mm$  \* Thickness 53.8  $\pm 0.5mm$

## BMS Specifications

- Monitoring: battery voltage, cell voltage, cell temperature, environment temperature, BMS MOS temperature, SOC, SOH, Charge/Discharge current, Cycles times, Capacity, Dry contact
- Cell voltage resolution:  $\leq 1mV$
- Battery voltage resolution:  $\leq 10mV$
- Voltage tolerance:  $\leq 0.5\%$
- Current tolerance:  $\leq 2\%$
- Temperature tolerance:  $\leq 3^{\circ}C$
- SOC, SOH tolerance:  $\leq 5\%$
- Capacity tolerance:  $< 5\%$
- Protections and alarm:
  - Cell Over/ Lower voltage and Battery Over/ Lower voltage
  - Overcharge current
  - Over discharge current
  - High and low temperatures: cell temperature, environment temperature, BMS temperature
  - Short circuit, reverse polarity
- External alarm dry contact protection: Dry contact N.O switches to N.C during protection
  - Low cell and battery voltage
  - High cell and battery voltage
  - Overcharge current
  - Over discharge current
  - High and Low temperature: cell temperature, environment temperature, BMS temperature
  - Short circuit, reverse polarity
  - Battery Off, Low capacity
- Battery status, alarm status, fault status, dry contact status, control dry contact port from software
- Data store up to 10,000 records and export to PC
- Management Software communicate to PC
- Temperature sensors monitor: 4 sensors for cells, 1 sensor for environment, 1 sensor for BMS

## Capacity Table

Capacity with DoD 100%	Discharge Current
$\geq 99\%Crt (25^{\circ}C)$	0.2C
$\geq 98\%Crt (25^{\circ}C)$	0.5C
$\geq 96\%Crt (25^{\circ}C)$	0.8C
$\geq 90\%Crt (45^{\circ}C)$	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%	5000	4500	3500	3000	2000
80%	6000	5000	4000	3500	2500
60%	6500	6000	5500	5000	3000
40%	7000	6500	6000	5500	3500

# BMS Software management

PBmsLVToolsV0.35 Protocol: HS-PACE-232-OLT\_V1.0

RealTimeMonitor ParallerMonitor SaveRecord ExportRecord ParamSetting SystemSetting Setting Tools

**BatteryInfo**

TotalVoltage: 0 V

Current: 0 A

SOC: 0 %

SOH: 0 %

RemainCapacity: 0 mAh

FullCapacity: 0 mAh

CycleTimes: 0

IndV1: 0 V

**CurrentPACK**

PACK: 1

Host: 0

Serial: Adr 1

OpenSerial StartMonitor Poll

**Temperatures**

TCell1	0.0
TCell2	0.0
TCell3	0.0
TCell4	0.0
MOS_T	0.0
ENV_T	0.0

**SystemStatus(Only read)**

CHGMOS DSGMOS

CHGCurValid Heating

DSGCurValid ACin

LimitCurrent Fully

Soldershts1 Soldershts2

**SingleBatteryVoltages**

1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0

**MaxVolt: 0 mV VoltDiff: 0 mV**

**MinVolt: 0 mV**

**SwitchControl**

CHG OFF DSG OFF

Alarm OFF LED OFF

Limit OFF Soldershts1Enable

ForcedSleep Soldershts2Enable

**WarningStatus**

None

**ProtectStatus**

None

**MalfunctionStatus**

None

**PACEex 沛城**

10/16/2023 08:31:53 Firmware: BMS S/N: PACK S/N: English No Communication

PBmsLVToolsV0.35 Protocol: HS-PACE-232-OLT\_V1.0

RealTimeMonitor ParallerMonitor SaveRecord ExportRecord ParamSetting SystemSetting Setting Tools

	Alarm(V)	Protect(V)	ProtectRec(V)	IsEnable	ProtectDelay(ms)
CellOverCHG	0.00	0.00	0.00	<input type="checkbox"/>	0
CellOverDSG	0.00	0.00	0.00	<input type="checkbox"/>	0
PackOverCHG	0.00	0.00	0.00	<input type="checkbox"/>	0
PackOverDSG	0.00	0.00	0.00	<input type="checkbox"/>	0

	Alarm(°C)	Protect(°C)	ProtectRec(°C)	IsEnable
CHG OT	0	0	0	<input type="checkbox"/>
CHG UT	0	0	0	<input type="checkbox"/>
DSG OT	0	0	0	<input type="checkbox"/>
DSG UT	0	0	0	<input type="checkbox"/>
MOS OT	0	0	0	<input type="checkbox"/>
Amb OT	0	0	0	<input type="checkbox"/>
Amb UT	0	0	0	<input type="checkbox"/>

**CHGCurrent**

☒ IsEnable

CHGCurrentWarning(A) 0

CHGCurrentProtect(A) 0

CHGCurrentProtectDelay(ms) 0

**BatteryParameter**

Cut Off Voltage(V) 0.00

Cut Off Current(mA) 0

Low Battery Warning(%) 0

**DSGCurrent**

☒ IsEnable

DSGCurrentWarning(A) 0

DSGCurrentProtect1(A) 0

DSGCurrentProtectDelay1(ms) 0

ReadParameter WriteParameter ResetParameter ClearParameter Export Import

10/16/2023 08:27:49 Firmware: BMS S/N: PACK S/N: English No Communication

RealTimeMonitor

ParallerMonitor

SaveRecord

ExportRecord

ParamSetting

SystemSetting

Setting

Tools

	Alarm(V)	Protect(V)	ProtectRec(V)	IsEnable	ProtectDelay(ms)
CellOverCHG	0.00	0.00	0.00	<input type="checkbox"/>	0
CellOverDSG	0.00	0.00	0.00	<input type="checkbox"/>	0
PackOverCHG	0.00	0.00	0.00	<input type="checkbox"/>	0
PackOverDSG	0.00	0.00	0.00	<input type="checkbox"/>	0

	Alarm(°C)	Protect(°C)	ProtectRec(°C)	IsEnable
CHG OT	0	0	0	<input type="checkbox"/>
CHG UT	0	0	0	<input type="checkbox"/>
DSG OT	0	0	0	<input type="checkbox"/>
DSG UT	0	0	0	<input type="checkbox"/>
MOS OT	0	0	0	<input type="checkbox"/>
Amb OT	0	0	0	<input type="checkbox"/>
Amb UT	0	0	0	<input type="checkbox"/>

Low Battery Warning(%)

0

DSGCurrent

☒ IsEnable

DSGCurrentWarning(A)

0

DSGCurrentProtect1(A)

0

DSGCurrentProtectDelay1(ms)

0

DSGCurrentProtect2(A)

0

DSGCurrentProtectDelay2(ms)

0

ShortCycleProtectDelay(μs)

0

Balanced/SleepVolSetting

BalancedStartUpVol(V)

0.00

BalancedStartUpVolDiff(mV)

0

CellSleepVoltage(V)

0.00

CellSleepDelay(min)

0

ReadParameter

WriteParameter

ResetParameter

ClearParameter

Export

Import

10/16/2023 08:30:18
Firmware:
BMS S/N:
PACK S/N:
English
No Communication

## 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