

HIGH PERFORMANCE LITHIUM-ION BATTERY

DATA SHEET **NE 48100 LIGC**

48V 100AH
**WARRANTY
36
MONTHS**

GENERAL CHARACTERISTICS

Nominal Voltage (V)	48.0
Capacity (Ah) @ 0.2C, 25°C	100.0
Energy (Wh)	4800
No. of cell in series	15
No. of cell in parallel	1
Total No. of cell	15
Cell Type	Prismatic
Chemistry	Li-FePO ₄
Dimensions	450 * 341* 286 mm

ELECTRICAL CHARACTERISTICS

Maximum cut-off voltage (V)	54.7
Minimum cut-off voltage (V)	41.2
Charging Voltage (V)	54.0
Charging Mode	CCCV
Recommended charging current (A)	20.0
Maximum charging current (A)	30.0
Maximum continuous discharging current (A)	100.0
Peak discharge current (A) up to 10 sec	150.0
Cell Discharging Protection level (V)	2.75
Cell charging protection level (V)	3.65
Balancing current (mA)	50
Cycle Life @ 0.5C/1.0C @ 25°C	1500
DOD Level (%)	90%

PROTECTIONS

Cell under voltage protection	Yes
Cell over voltage Protection	Yes
Over Current Protection	Yes
Short circuit protection	Yes
Temperature protection	Yes

TEMPERATURE CHARACTERISTICS

Working Temperature (°C)	-10°C – 60°C
Storage Temperature (°C)	0°C - 45°C

COMMUNICATION CHARACTERISTICS

CAN based Telematics System	Yes
RS485/UART Communication	Yes
Communication with charger	Yes
Bluetooth Enabled	Yes

PHYSICAL CHARACTERISTICS

Length width height (L*W*H)	450 * 341* 286 mm
Connector for Charging / Discharging	SB-120 & SB-50
Weight of Battery	48±2 Kg

CELL SPECIFICATION

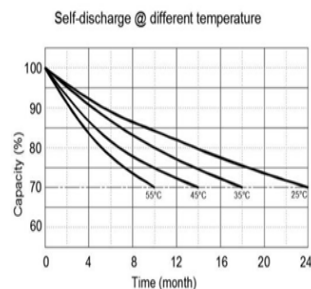
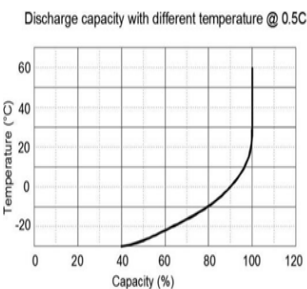
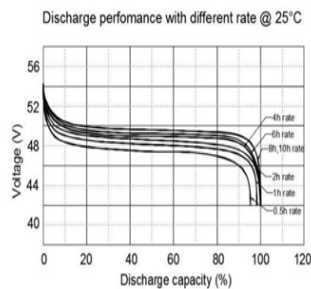
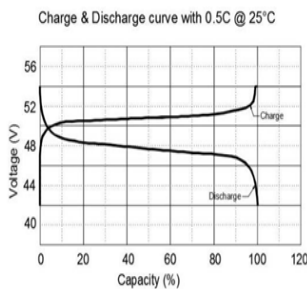
Parameter	Specification	Remarks
Typical capacity	≥ 100 Ah	At 1C Discharge Current
Operating Voltage (V)	2.50 - 3.65 V	0°C – 60° C
	2.00 - 3.65 V	-20°C - 0°C
Impedance (1Khz)	≤0.50 mΩ	
Shipping Capacity	10 - 30 % SOC	
Weight	≤ 2.30 Kg	
Self-Discharge	≤ 3.5 % per month	

BMS PARAMETER

Feature	Test items	specification			
		Min	Typical	Max	Unit
Operating Voltage	Voltage Range	38	54.0	56	V
Operating Current (continuous)	Recharge Current		3.65	200	A
	Discharge Current		1	200	A
Charge Protection	Charger Voltage (CC-CV)		3.50		V
	Overcharge protection voltage		2.50		V
	Overcharge protection delay time		1		S
	Overcharge protection recovery voltage		2.70		V
Discharge Protection	Over discharge protection voltage				V
	Over discharge protection delay time		200		mS
	Over discharge protection recovery voltage		1		V
	Over discharge protection recovery conditions				
Overcurrent Protection	Charging overcurrent protection value				A
	Charge overcurrent delay				mS
Short circuit protection	Short circuit protection current		4000		A
	Short circuit protection delay time		100		uS
	Short circuit protection recovery		Disconnect load or charge		
Equalization function	Equalization turn-on voltage		3.40		V
	Equalization current		50		mA
Temperature(built-in)	Temperature protection value			85±5	C0
	Temperature protection release value			60±15	C0
Internal resistance	Discharge circuit internal resistance		5	20	mR
Self-consumption	Operating mode		50	100	uA
Operating temperature	Normal working range	-20		70	C0
Storage temperature	Humidity below 90%	-40		85	C0

BMS FEATURES

- ▶ Smart BMS
- ▶ BMS provides complete management and protection for the battery.
- ▶ Voltage, Current, Temperature warning and protection.
- ▶ Maximum operating current can be customized.
- ▶ Short protection function.
- ▶ Balance function. Control and balance the voltage between cells during charging and idle.
- ▶ It can be connected to the display screen to display the SOC and various working conditions of the battery.
- ▶ Communication function (Bluetooth, CAN, RS485)
- ▶ Connect to computer through PC BMS software and dedicated cable.
- ▶ PC BMS software could realize: Monitor all parameters of battery Monitor battery status, alarms, protection, errors.



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