

## V-LFP4840 48V40Ah

Vision Technology delivers safe lithium iron phosphate battery solutions for Telecom application.



### Overview

The V-LFP 48V40Ah back-up lithium iron phosphate battery system is developed for backup of Telecom equipment. Under normal condition, grid AC power supply to rectifier module and the Telecom loads and charge battery pack; When the AC power fail, rectifier module stop power supply, the battery serves for Telecom equipment, to ensure the Telecom equipment runs normally; when the AC power is switched on again, power rectifier module for Telecom equipment recover to while charge the battery pack.

### Features

- RS485 communication output for monitoring
- Built-in BMS with Charging current limitation
- Built-in automatic protection for over-charge, over-discharge and over-temperature conditions
- State of charge and state of health indication
- Built-in battery control for efficient operation
- Internal cell balancing
- Compatible with standard Telecom rectifiers
- Maintenance free

Specifications		V-LFP4840
Voltage		48 V
Nominal Capacity (40°C , 0.5C)		40 Ah
Weight (Approximate)		30.0 ±0.3Kg
Energy	Normal energy (40°C , 0.5C)	2000 Wh
	Volumetric energy density	119Wh/L
	Gravimetric energy density	66Wh/kg
Dimensions (W*D*H)	Width*Depth* Height	442mm*430mm*88mm
Standard Discharge 25°C	Max. constant current	40A
	Cut-off voltage	42V
Standard charge 25°C	Charge Voltage	53.5V~54V
	Max. constant current	40A
	Recommended charging current and time	20A(0.5C) for 2.5 hours
Round trip efficiency(%)		>98%
Calendar life	25°C	>10 years
Cycle life (0.2C, 25°C)		80% DOD 4000 cycles
Operating temperature		Charging: 0°C~45°C
		Discharging: -20°C~45°C
Storage temperature		Recommended range: -20°C~45°C

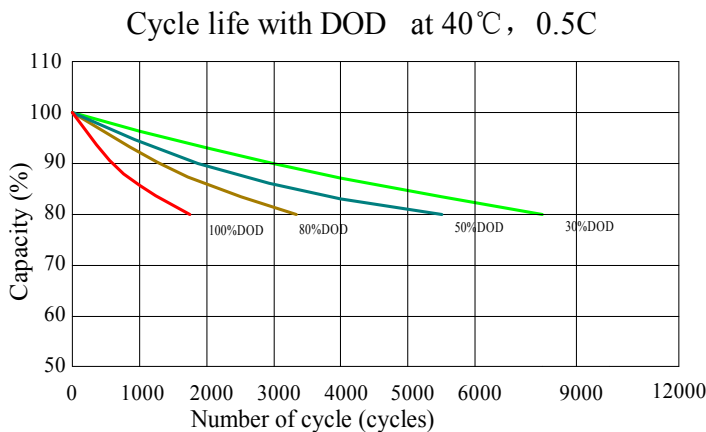
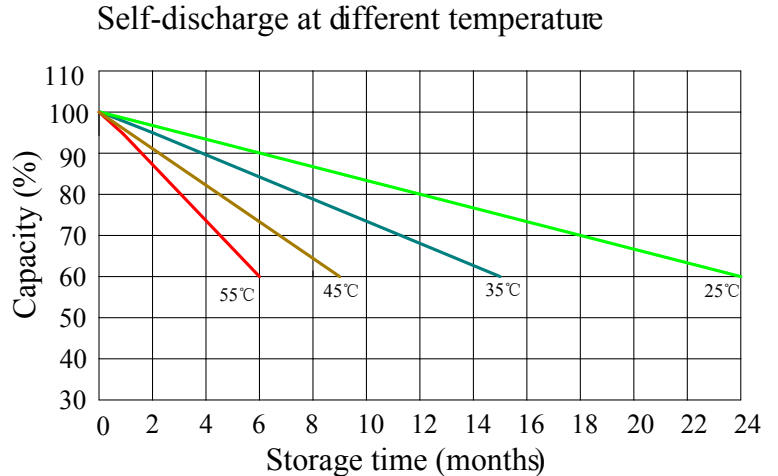
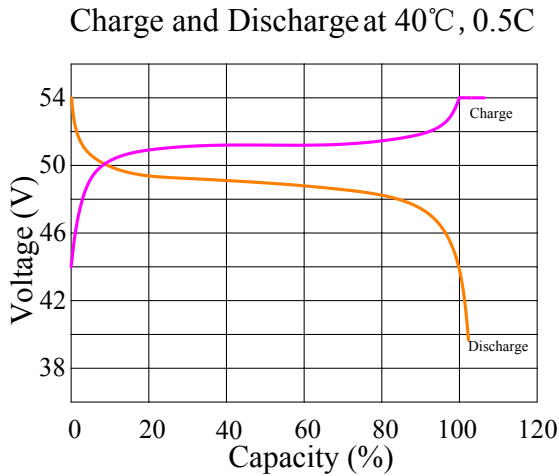
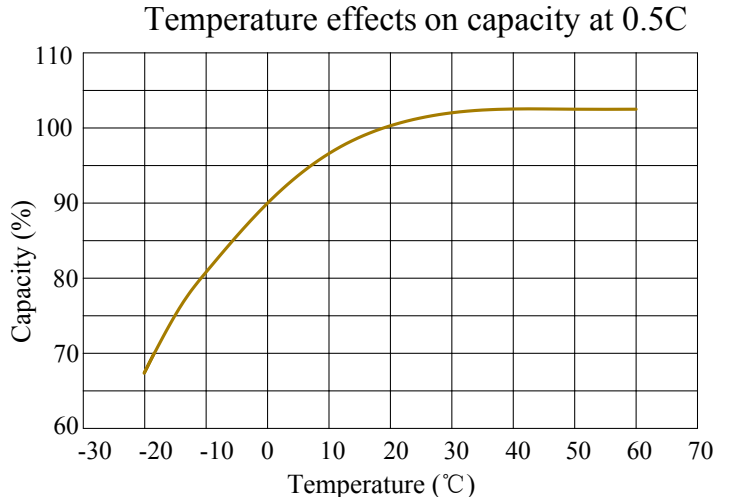
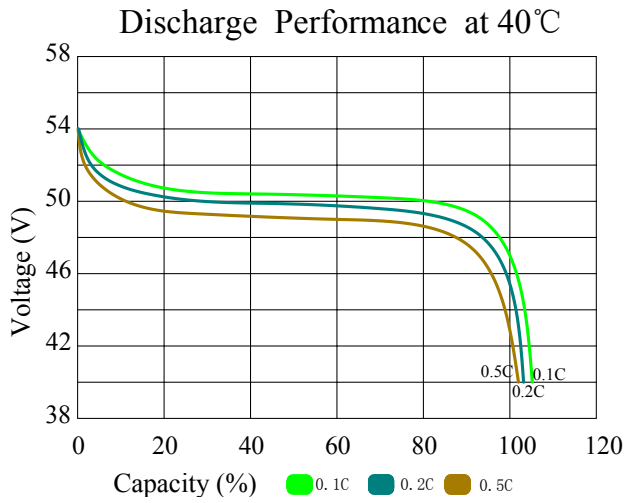
## BMS Parameters.

NO.	Type		Function	Setting value		Remarks
				V-LFP4840	48V40Ah	
1	Voltage	Charge	Cell Voltage Protection	3.90V Protection		Recover at 3.6V
2			Total Voltage Protection	56.0V Warning/ 57.0V Protection		Recover at 54.0V
3		Discharge	Cell Voltage Protection	2.0V Protection		Recover at 3.1V
4			Total Voltage Protection	43.2V Warning / 42V Protection		Recover at 46.5V
5	Current	charge	Normal	$\leq 40A$		
6		Discharge	Normal	$\leq 40A$		
7			Over Current Protection 1	$> 40A$ and $< 100A$		Delay 30s ,recovery in every 1min
			Over Current Protection 2	$> 100A$ and $< 200A$		Delay 3s ,recovery in every 1min
8			Short Circuit Protection	$\geq 200A$		Delay 1mS
9	Temp	Cell Temp 1	Low temp protection	Charging $< 0^{\circ}C$ Discharging $< - 20^{\circ}C$		Delay 1~2S
10		Cell Temp 2	High temp protection	Charging $\geq 70^{\circ}C$ Discharging $\geq 75^{\circ}C$		Delay 1~2S
11		PCB	Range	$\geq 95^{\circ}C$		Recovery at 75 $^{\circ}C$
12	Cell Balance	Balance	Make all cells be balance during charging process. Current: 150mA	$V_{Max.} \geq 3.40V$ and $V_{Max.} - V_{Min} \geq 40mV$ , Start balance		All cell voltages $\leq 3.65V$ and $V_{Max.} - V_{Min} \leq 40mV$ , Stop balance

## Battery Status.

1. Stop/Transport Mode. In working mode, press the Start/Stop button, battery will go to STOP mode with low self-discharge. In STOP mode, charging MOS and discharging MOS are open, battery cannot charge, discharge or communicate.
2. Working Mode. In STOP mode, connect the battery to SMPS, press the Start/stop button, battery will go to working mode. In working mode, BMS will monitor battery voltage, current, and temp, and communication is available, charging MOS and discharging MOS are closed, Battery will operate as the settings.
3. Sleep Mode. After turn on the battery , if the battery voltage below low voltage protection, BMS will go to sleep mode in 1 minute. In sleep mode, charging MOS and discharging MOS are closed ,BMS will check the current in every 1 min, if there is charging current connecting, battery will turn to working mode.
4. Error Mode. In working mode, if there is: ①.Battery cells,  $\Delta U > 2.5V$ , or ②.Any cell voltage  $> 4.1V$  or  $< 0.5V$ , or ③. Battery temp is  $< -30^{\circ}C$  or  $+100^{\circ}C$ . BMS will go to error mode, ALM will bright and other LED will shut down, and go to STOP mode, charging MOS and discharging MOS are open. Need to make troubleshoot.

### Performance Curve.



Performance may vary depending on, but not limited to cell usage and application. If cell is used outside specifications, performance will diminish. All specifications are subject to change without notice. All information provided herein is believed, but not guaranteed, to be current and accurate.