

# BK LFP48-100 (48V 100Ah)

## Lithium Iron Phosphate (LiFePO4)



### Salient Features

- **Longer Life Cycles:** ~20 times longer life cycles and ~ 5 times longer float/shelf life as compare to Lead Acid battery, helping to minimize replacement cost and reduce total cost of ownership.
- **Lighter Weight:** 40% lighter than lead acid batteries.
- **Higher Power:** Delivers twice power of lead acid battery, even high discharge rate, while maintaining high energy capacity.
- **Wider Temperature Range:** -20°C~55°C.
- **Superior Safety:** Eliminates the risk of explosion or combustion due to high impact, overcharging or short circuit situation.



### Applications

- Telecommunication
- Solar/ Wind Energy Storage System
- UPS (Backup Power)
- Medical Equipment
- Lighting
- Electric Vehicles, Electric Mobility
- Marine
- Robotics

### Battery Specifications

Battery Type	LiFePO4	Voltage Window	43.2-52.5V
Nominal Voltage	48V	Recommend Charge Voltage	52.5V
Nominal Capacity	100Ah	Max. Charge Voltage	54.75V
Energy Density	4800Wh	Recommend Charge Current	20A
Dimensions (LxWxH)	480*442*155mm	Max. Continuous Current	100A
Weight	45Kgs	Recommend Discharge Voltage	43.2V
Terminal Type	M6	Max. Discharge Voltage	42V
Terminal Torque	8.5NM	Max. Continuous Discharge Current	100A
Case Material	SPCC	Peak Discharge Current	150A/3S
BMS Build-in	Yes	Cycle Life (0.2C, 25°C @80% DOD)	>5000 cycles
AH efficiency - round trip	>98%	Discharge Temp.	-20°C-55°C
Self-Discharge per month	<3%	Charge Temp.	0°C-55°C
Max in parallel	16Pcs	Storage Temp.	-20°C-45°C
Max in Series	Not Allowed	Bluetooth (App)	Optional
LCD Screen	Optional	Heating Function	Optional

## BMS Characteristics

Primary Charging Protection	Current :105A	Delay Time: 20s
Second Charging Protection	Current :110A	Delay Time: 2~3s
Primary Discharging Protection	Current :110A	Delay Time: 30s
Second Discharging Protection	Current :150A	Delay Time: 2~3s
Over Charge Voltage Protection	Voltage :55.5V	Delay Time: 1~2s
Over Discharge Voltage Protection	Voltage :42V	Delay Time: 1~2s
Temperature Protection	PCB Temperature $\geq$ 95°C Recover $\leq$ 85°C	
Communication Port	Major RS485,optional for CAN / Dry port, customized acceptable	

## Constant Current Discharge Data (Amperes @ 25°C)

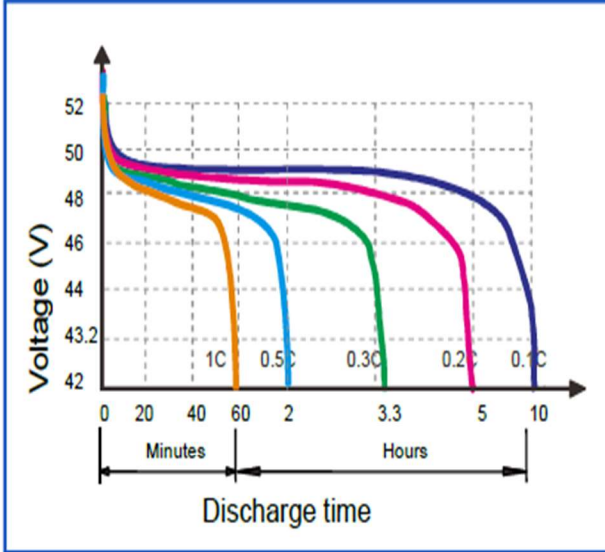
Discharge Time	1h	2h	3h	4h	5h	10h	20h
<b>Cut off Voltage (43.2)</b>	100A	50A	33.2A	25A	20A	10A	5A

## Constant Power Discharge Data (Watts @ 25°C)

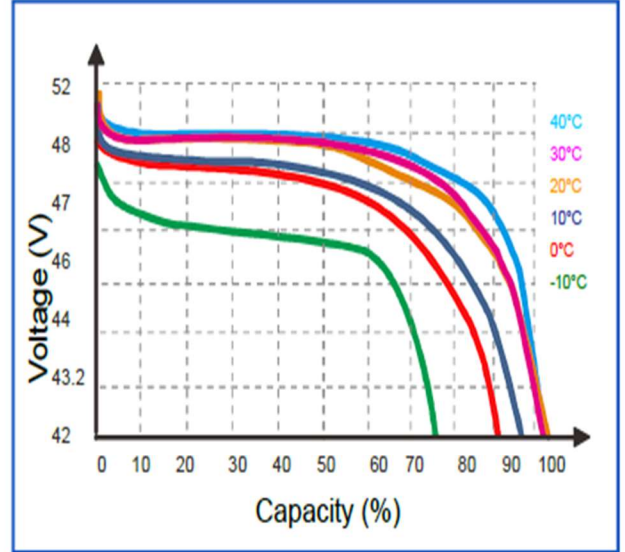
Discharge Time	1h	2h	3h	4h	5h	10h	20h
<b>Cut off Voltage (43.2)</b>	4800W	2400W	1600W	1200W	960W	480W	240W

# Performance Diagrams

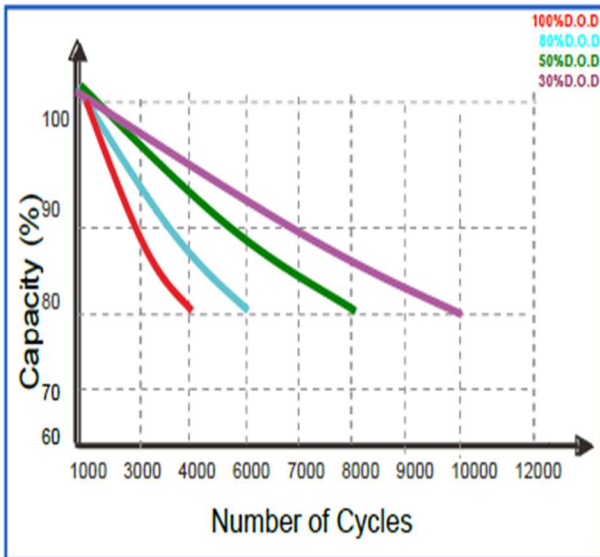
Discharge characteristics (25°C)



Different Temperature Discharge Curve (0.5C)



Different DOD Discharge cycle life Curve 0.2C 25°C



State of Charge Curve (0.5C, 25°C)

