



EGA 48V 50Ah Lithium Iron Phosphate (LiFePO4) Battery

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Features of LiFePO4 Battery

- Extended Cycle Life:** The LiFePO4 battery offers a significantly prolonged cycle life, up to 20 times greater when compared to lead acid batteries. Additionally, it boasts an impressive five times longer float/calendar life. This enhanced durability minimizes the need for frequent replacements, thereby reducing the overall cost of ownership.
- Reduced Weight:** The LiFePO4 battery weighs approximately 40% less than an equivalent lead acid battery, making it a convenient 'plug and play' replacement option for lead acid batteries without the need for substantial modifications.
- Higher Power Output:** This advanced battery technology provides twice the power output of lead acid batteries, even under high discharge rates, while maintaining a high energy storage capacity. This feature ensures reliable and consistent power delivery for various applications.
- Wide Temperature Range:** The LiFePO4 battery operates efficiently within a broad temperature range, spanning from -20°C to 60°C. This versatility makes it suitable for deployment in diverse environmental conditions.
- Enhanced Safety:** Utilizing Lithium Iron Phosphate chemistry, this battery eliminates the risks associated with explosion or combustion due to high-impact situations, overcharging, or short circuits. This ensures a higher level of safety during operation and maintenance.
- Modular Design for Flexibility:** The LiFePO4 battery features a modular design that allows for easy scalability. It enables the deployment of up to four batteries in series and up to ten batteries in parallel, offering increased flexibility to meet specific power and energy requirements.



BMS Specifications

- Overcharge Detection Function**
- Over Discharge Detection Function**
- Over Current Detection Function**
- Temperature Protection**
- Balance Function**

Applications

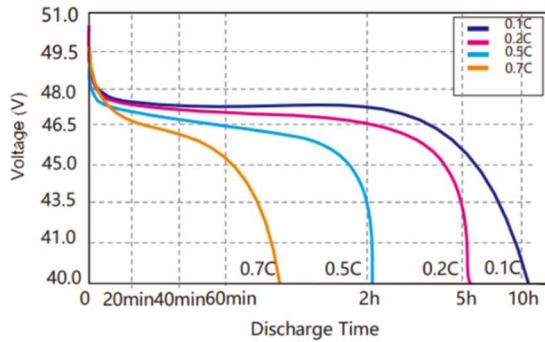
- Telecom Energy Storage**
- Solar/Wind Energy Storage**
- UPS/Backup System**
- E-bike/Golf Battery**
- Lighting System**

Electrical Specifications

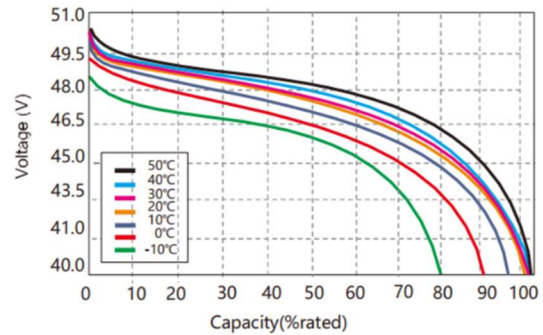
Electrical Characteristics	Nominal Voltage	48.0V
	Nominal Capacity	50Ah
	Energy	2400Wh
	Internal Resistance	≤75mΩ
	Cycle Life	> 4000 cycles @ 0.5C 80% DOD
	Self-Discharge	<3%/Month
	Charge Efficiency	100% @ 0.2C
	Discharge Efficiency	96~99% @ 0.5C
Standard Charge	Charge Voltage	52±0.5V
	Method of Charge	0.2C to 54.0V, then 54.0V, charge current to 0.02C (CC/CV)
	Standard Charge Current	10A / 0.2C
	Max. Constant Charge Current	50A (if over, limited 20A)
	Charge Cut-off Voltage	54-56V
Standard Discharge	Continuous Current	10A / 0.2C
	Max. Constant Discharge Current	50A Constant, Peak 100A for 10s
	Discharge Cut-off Voltage	40.0V
Environmental	Charge Temperature	0°C to 45°C @ 60±25% Relative Humidity
	Discharge Temperature	-20°C to 60°C @ 60±25% Relative Humidity
	Storage Temperature	0°C to 40°C @ 60±25% Relative Humidity
		IP21
Mechanical	Cell & Method	GSP27135250-50Ah 15S1P
	Pack Case	Iron Case for Pack, Aluminium Shell for Cell
	Dimensions (mm)	442 X 400 X 132mm / 19inch Rack on 3U
	Weight (kg)	±30kg
	Gravimetric Specific Energy	115WH/kg
	Protocol (Optional)	Modbus/RS485/RS232/CAN (Optional SNMP)
	SOC (Optional)	LED & LCD Display



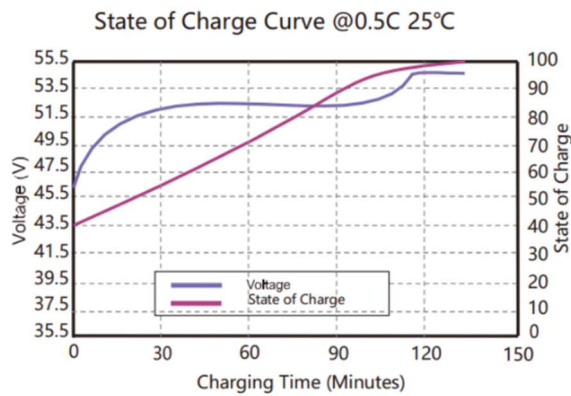
Discharge Curves at Varying Rates



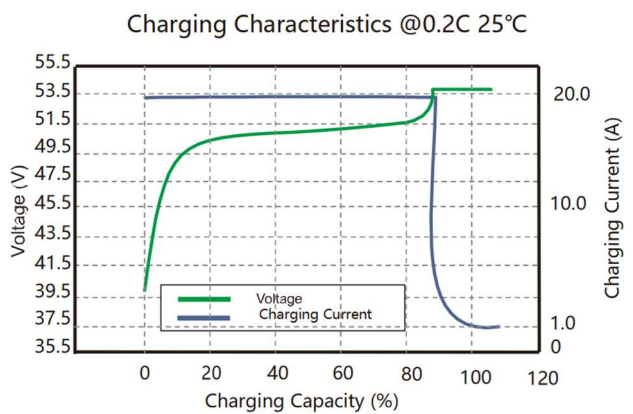
Temperature-dependant Discharge Curves



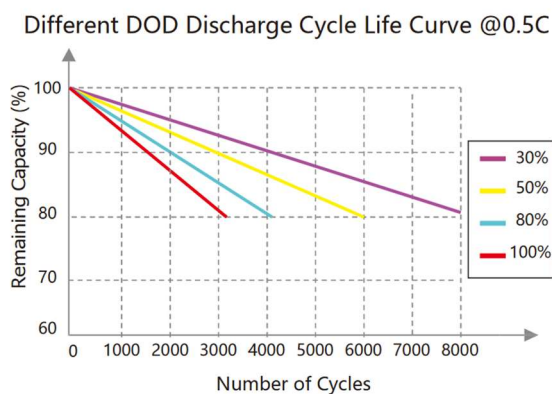
State of Charge Curve



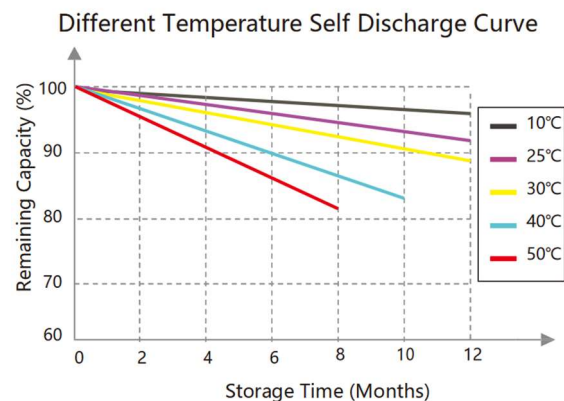
Charging Characteristics Curve



Cycle Life Curve



Self-Discharge Characteristics Curve





General Features

1. **Sine Wave:** Pure sine wave inverter
2. **Charge Controller:** Built-in MPPT solar charge controller
3. **Voltage Range:** Selectable input voltage range for home appliances and personal computers
4. **Charging:** Selectable charging current based on applications
5. **Input:** Configurable AC/Solar input priority via LCD setting
6. **Compatibility:** Compatible to AC mains or generator power
7. **Battery Equalization:** for optimized battery performance and lifecycle
8. **Parallel Operation:** with up to 9 units



INVERTER SPECIFICATIONS	
Model	EGA 5000 MKS
Capacity	5000VA/4000W
Parallel Capability	Up to 9 units
INPUT	
Voltage	230VAC
Selectable Voltage Range	170-280 VAC (For Personal Computers): 90-280 VAC (For Home Appliances)
Frequency Range	60Hz or 50Hz (auto sensing)
OUTPUT	
AC Voltage Regulation (Batt. Mode)	230VAC $\pm$ 5%
Surge Power	10000VA
Efficiency (Peak)	93%
Transfer Time	10ms (For Personal Computers) :20ms (For Home Appliances)
Waveform	Pure Sine Wave
BATTERY	
Battery Voltage	48VDC
Floating Charge Voltage	54VDC Max: 58VDC (optional 64VDC, please check with sales)
Overcharge Protection	60VDC (optional 66VDC, please check with sales)
SOLAR CHARGER	
Maximum PV Array Power	4000W
MPPT Range @ Operating Voltage	60 – 115VDC
Maximum PV Array Open Circuit Voltage	145VDC
Maximum Solar Input Current	50A
Maximum Solar Charge Current	80A



EGA 5000 MKS INVERTER

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AC CHARGER

Maximum AC Charge Current	60A
Maximum Charge Current	140A

PHYSICAL

Dimension, D X W X H (mm)	120 x 295 x 468
Net Weight (kg)	11

ENVIRONMENT

Humidity	5-95% Relative Humidity (Non-condensing)
Operating Temperature	0°C to 55 °C
Noise Level	-15 °C to 60 °C