



GIGAWATT SOLAR

# CÔNG TY TNHH NĂNG LƯỢNG GIGAWATT

Website: <https://gwsolar.vn>

## LITHIUM IRON PHOSPHATE BATTERY - GIGABOX 10S



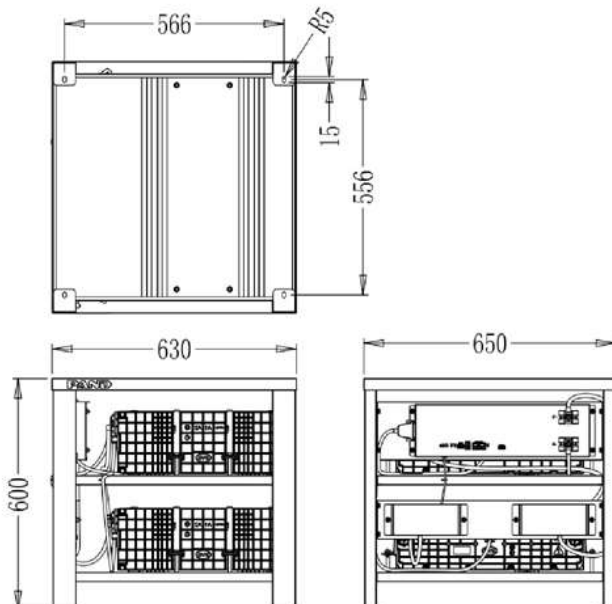
### ■ Features:

- High efficiency, energy saving and stable power supply;
- High performance, high safety lithium iron phosphate energy storage battery;
- Easy Installation and Uninterruptible Maintenance.
- The capacity configuration is flexible and changeable, supports up to 32 systems in parallel, and the capacity is up to 320kWh.
- Comply with IEC62619, IEC60730 etc. standard

### ■ Application:

- Renewable energy storage
- Smart power grids and microgrids system
- Distributed energy storage system
- Hybrid energy storage system such as solar and wind
- Home energy storage system
- Solar power generation grid/off-grid
- Energy storage system
- Emergency lighting system
- Generator and battery hybrid energy system

### ■ Dimension (mm)



### ■ Battery system technical parameters:

System parameter	51.2V/200AH
Total Energy	10.0 kWh
Useable Energy	9.0 kWh
Depth of Discharge	90%
Rated DC Output Power	5.12kW
Maximum Charge Power	5.84 kW
Maximum Discharge Power	7 kW
Round-Trip Efficiency	>93%
System composition	1P16S
Discharge method	CC/CP
Maximum discharge current	120A/60S
Charging method	CC/CP/CV
Maximum charging current	100A
Communication	CAN/ RS485
Enclosure Protection Rating	IP20
Net Weight	135±5kg
Charging Temperature Range	0°C~+50°C
Discharge Temperature Range	-20°C~+55°C
Certificate & Safety Standard	IEC 62619、 IEC 61000
Compatible Inverters	



Warranty

5 years

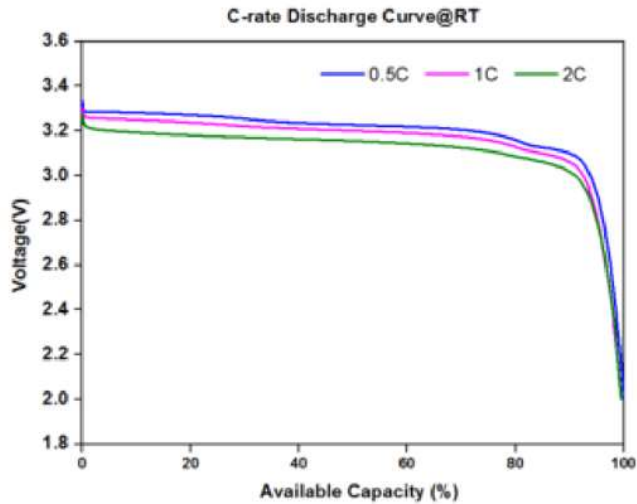
## Cell technical parameters:

Type of battery	Lithium iron phosphate battery
Rated voltage/capacity	3.2V/200Ah
Cell voltage range	2.5V-3.65V
Weight	6.72 Kg
Size(L*W*Hmm)	416.0 *145.5*57.5
Operating temperature	Charge : 0°C ~ +50°C; Discharge : -20°C ~ +55°C;



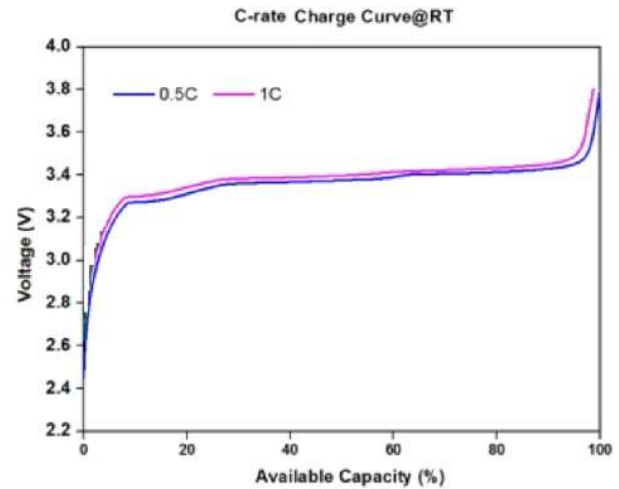
### Discharge at Different Rate:

After fully charged at  $23 \pm 2^\circ\text{C}$  with 0.5C charge current, the cell is discharged at different C-rate to 2.00V.



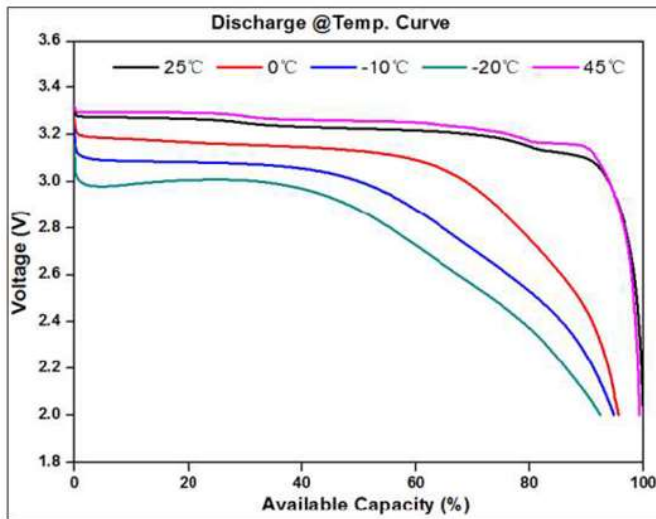
### Charge at Different Rate:

After fully discharged at  $23 \pm 2^\circ\text{C}$  with 0.5C discharge current, the cell is charged at different C-rate to 3.80V.

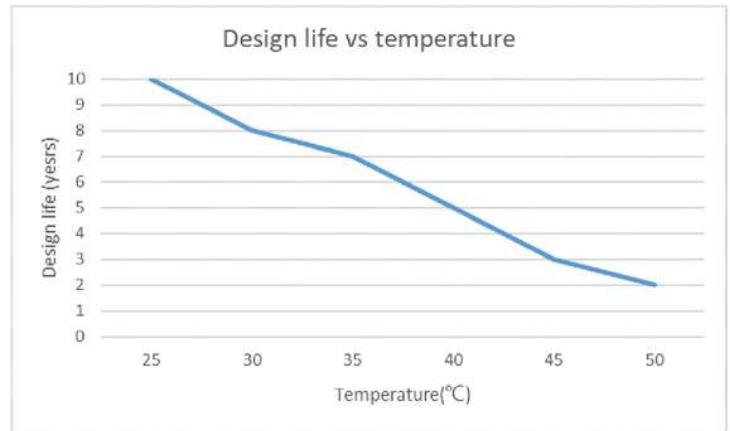


### Discharge at Different Temperatures

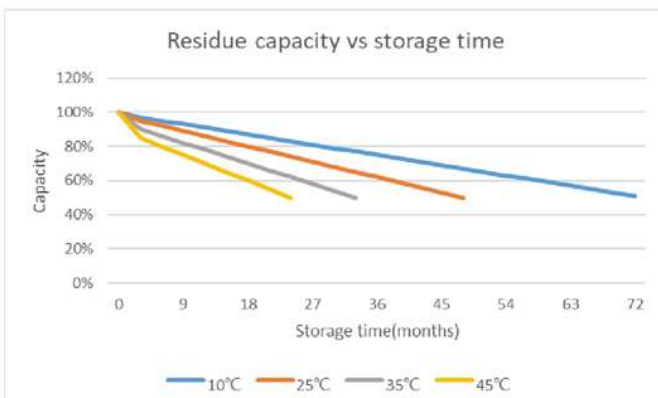
After fully charged at  $23 \pm 2^\circ\text{C}$  with 0.5C charge current, then keep the cell at different temperature for 8 hours. The cell is discharged to 2.00V with 0.5C.



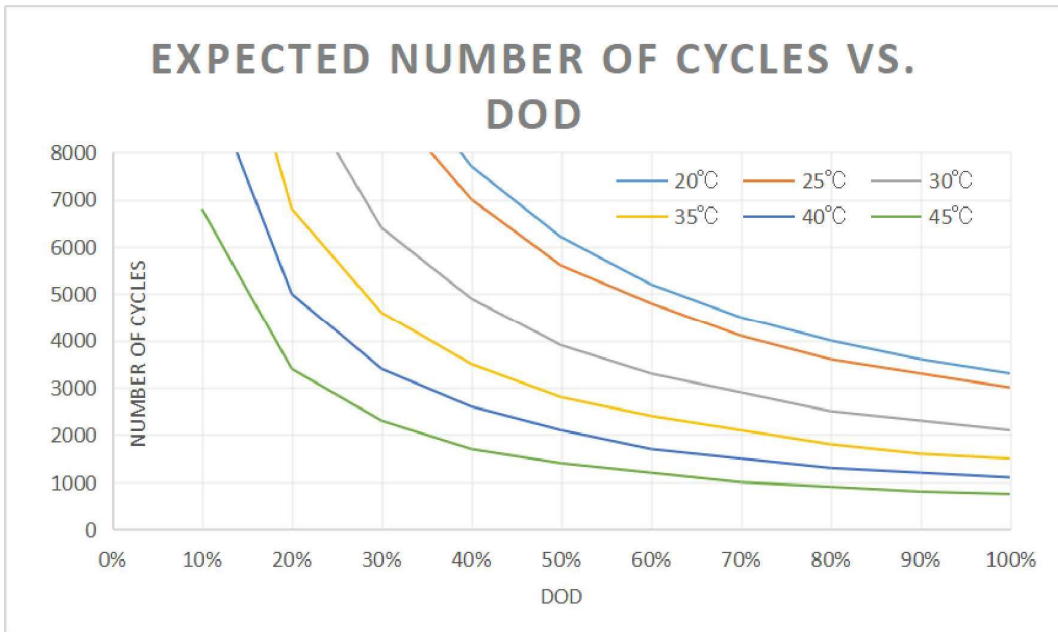
### Design life (years) at Different Temperatures



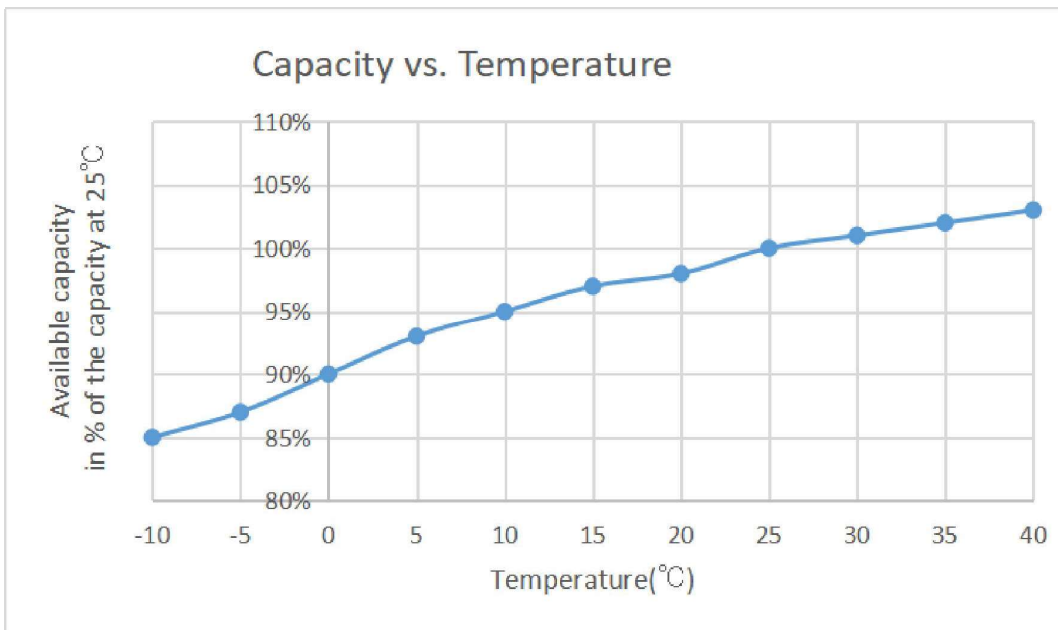
### Residue capacity vs storage time at Different Temperatures



### Expected number of cycles VS DOD at Different Temperatures



### Battery Capacity at Different Temperatures



## Battery module technical parameters

Nominal Voltage	25.6V
Nominal Capacity	200Ah
Length* Width* Height	489*457.6*170.5mm
Weight	About 56.3Kg
Charging Method	CC/CP/CV
Charging Current	100A
Discharging Method	CC/CP
Discharging Current	120A
Discharge Cut-off Voltage	2.5V/CELL
Operating Temperature	Charging: 0~+50°C Discharging: -20~+55°C

### Dimensions



## Safety instructions

### Observe the following precautions

- Risks of explosion
  - Do not subject the battery pack to strong impacts.
  - Do not crush or puncture the battery pack.
  - Do not dispose of the battery pack in a fire.
- Risks of fire
  - Do not expose the battery pack to temperatures in excess of 50°C.
  - Do not place the battery pack near a heat source, such as a fireplace.
  - Do not expose the battery pack to direct sunlight.
  - Do not allow the battery connectors to touch conductive objects such as wires.
- Risks of electric shock
  - Do not disassemble the battery pack.
  - Do not touch the battery pack with wet hands.
  - Do not expose the battery pack to moisture or liquids.
  - Keep the battery pack away from children and animals.
- Risks of damage to the battery pack
  - Do not allow the battery pack to get in contact with liquids.
  - Do not subject the battery pack to high pressures.
  - Do not place any objects on top of the battery pack.

### Battery handling guide

- Use the battery pack only as directed.
- Do not use the battery pack if it is defective, appears cracked, broken or otherwise damaged, or fails to operate.
- Do not attempt to open, disassemble, repair, tamper with, or modify the battery pack. The battery pack is not user serviceable.
- To protect the battery pack and its components from damage when transporting, handle with care.
- Do not impact, pull, drag or step on the battery pack. Do not subject it to any strong force.
- Do not insert foreign objects into any part of the battery pack.
- Do not use cleaning solvents to clean the battery pack.

## Response to emergency

### Situations

The product comprises multiple batteries that are designed to prevent hazards resulting from failures. However, we cannot guarantee their absolute safety.

### Leaking Batteries

If the product leaks electrolyte, avoid contact with the leaking liquid or gas.

If one is exposed to the leaked substance, immediately perform the actions described below.

**Inhalation:** Evacuate the contaminated area, and seek medical attention.

**Contact with eyes:** Rinse eyes with flowing water for 15 minutes, and seek medical attention.

**Contact with skin:** Wash the affected area thoroughly with soap and water, and seek medical attention.

**Ingestion:** Induce vomiting, and seek medical attention.

### Wet the product:

If the product is wet or submerged in water, do not try to access it. Contact PAND or your distributor for technical assistance.

### Damaged the product

Damaged the product are dangerous and must be handled with extreme caution. They are not fit for use and may pose a danger to people or property. If the product seems to be damaged, pack it in its original container, and then return it to PAND.

### Fire:



In case of fires, it is recommended to have an ABC or carbon dioxide extinguisher.

If a fire breaks out in the place where the product is installed, perform the following countermeasures:

1. Extinguish the fire before the product catches fire.
2. If it is nearly impossible to extinguish the fire but you have time, move the product to a safe area before it catches fire.
3. If the product has caught fire, do not try to extinguish the fire on the product, but evacuate people immediately.



When the product is burning, it produces poisonous gases.