OUR PROSPECTS

LVTOPSUN

LVTOPSUN Vision- Become the best battery supplier in the world.
our goal is to manuafacture The best battery and make lvtopsun battery become the first choice for customers.

LVTOPSUN Solar Technology Co.,Ltd **www.lvtopsun.com**

Overseas Branch

Philippines June@lvtopsun.com
Thailand Bin@lvtopsun.com
Cambodia Leo@lvtopsun.com
Vietnam jim@lvtopsun.com
South Africa chenshaofu@lvtopsun.com

LVTOPSUN Solar Technology Co.,Ltd

www.lvtopsun.com

PRODUCTION LINE

LVTOPSUN has strong R&D and production strength, world-class automation and automatic production line, and uses high-tech equipment and advanced technology.

Plate workshop

Assembly workshop

Chemical forming workshop

Packaging workshop

test machine

Automatic cutting machine

Automatic winding machine

COMPANY PROFILE

LVTOPSUN SOLAR Technology Co.,Ltd is big manufacturer andexporte of solar battery, established in 2008.

As a professional manufacturer, our company has more than 10 years'experience in manufacturing and exporting solar battery.

Our products are widely recognized and trusted by users and canmeet continuously changing economic and social needs.

We are increasingly expanding our international market share basedon quality products, excellent service, reasonable price and timely delivery.

We have developed business in over 50 countries around the world,also hope to establish a win-win cooperative relationship with youin the near future.

More Usable Energy

90% Depth of Discharge

Flexible Investment

10.24kWh Modular Design
Scalable from 10.24 to 153.6kWh

Safe & Reliable

Lithium Iron Phosphate Cell

Easy Operation

LCD Display + 4 buttons

Quick Commissioning

Perfect Compatibility

Compatible with DEYE, GOODWE, GROWATT, SOLIS, SOFAR, LUXPOWER, TBB ... hybrid inverter

Model	LVTS-512200

Performance	
Nominal Voltage	51.2 Vdc
Nominal Capacity	200Ah
Battery Energy	10.24 kWh
Charge Voltage	55.68-56.16 Vdc
Discharge Voltage	45.6-56.16 Vdc
Maximum Charge Current	100A
Maximum Discharge Current	160A
Maximum Charge Power	5120W
Maximum Discharge Power	8192W
Short circuit current	540A

Communication	
Display	LED indicator + LCD Display
Communication	RS232、RS485、CAN

General Specification	
Dimension(W×D×H mm)	465*186*695mm
Weight (Kg)	83.5kg
Installation	Wall Mounted
Working Temperature	-20℃ ~ 60℃
Storage Temperature	≤25℃,12 months; ≤35℃,6 months; ≤45℃,3 months
Operating / Storage Humidity	≤ 95%RH
Max Operating Altitude	≤2000m
IP Rating	IP20
Cell Technology	$LiFePO_4$, Lithium Iron Phosphate
Cycle life	6000 Cycles @ 90% DOD / 25℃ / 0.5C, 60% EOL
Warranty	5 years
Scalability	Max 15 batteries in parallel

Ordering and Deliverable Part	
Product ordering part	LVTS-512200 battery (cable/wall mount included)

More Usable Energy

90% Depth of Discharge

Flexible Investment

4.8kWh Modular Design
Scalable from 4.8 to 72 kWh

Safe & Reliable

Lithium Iron Phosphate Cell

Easy Installation

Rack mounted or wall mounted

Quick Commissioning

Automatic ID Assignment

Perfect Compatibility

Compatible with DEYE, GOODWE, GROWATT, SOLIS, SOFAR, LUXPOWER, TBB ... hybrid inverter

Model	LV48100

Performance	
Nominal Voltage	48 Vdc
Nominal Capacity	100Ah
Battery Energy	4.8 kWh
Charge Voltage	52.2~52.65 Vdc
Discharge Voltage	42.75~52.65 Vdc
Nominal Charge / Discharge Current	50A
Nominal Charge / Discharge Power	2400W
Max Charge / Discharge Current	100A
Max Charge / Discharge Power	4800W
Short circuit current	350A

Communication	
Display	SOC status indicator, LED indicator
Communication	RS232、RS485、CAN

General Specification	
Dimension(W×D×H mm)	440×500×130mm
Weight (Kg)	40.5kg
Installation	Rack mounted or wall mounted
Working Temperature	-20℃ ~ 60℃
Storage Temperature	≤25℃,12 months; ≤35℃,6 months; ≤45℃,3 months
Operating / Storage / humidity	≤ 95%RH
Max Operating Altitude	≤2000m
IP Rating	IP20
Cell Technology	$LiFePO_4$, Lithium Iron Phosphate
Cycle life	6000 Cycles @ 80% DOD / 25℃ / 0.5C, 60% EOL
Warranty	5years
Scalability	Max 15 batteries in parallel

Ordering and Deliverable Part	
Product ordering part	LV48100 battery (cable/wall mount included)

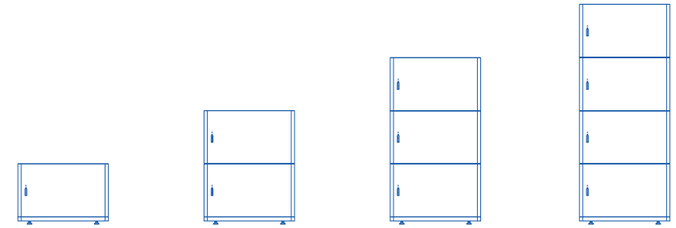
Safe & Reliable
Premium Lithium Iron Phosphate Cell

High Energy Density
Proprietary CTP Technology

Flexible Investment
Scalable from 5.12 to 20.48 kWh

Easy Installation
Ground mounted or Wall mounted

Perfect Compatibility
Compatible with Major PCS Brand



Model	LVTS 512100-1	LVTS 512100-2	LVTS 512100-3	LVTS 512100-4
Performance				
Nominal Voltage	51.2 Vdc			
Nominal Capacity	100 Ah	200 Ah	300 Ah	400 Ah
Battery Energy	5.12 kWh	10.24 kWh	15.36 kWh	20.48 kWh
Charge Voltage	55.68~56.16 Vdc			
Discharge Voltage	45.6~56.16 Vdc			
Max Charge Current	50A	100A	150A	200A
Max Charge Power	2500W	5000W	7500W	10000W
Max Discharge Current	100A	200A	200A	200A
Max Discharge Power	5000W	10000W	10000W	10000W
Short circuit current	350 A			
Communication				
Display	SOC status indicator, LED indicator			
Communication	RS232,RS485,CAN			
General Specification				
Dimension(W×D×H mm)	620 x145 x435mm	620 x145 x816mm	620 x145 x1197mm	620 x145 x1578mm
Weight (Kg)	45kg	87.5kg	130kg	172.5kg
Installation	Ground mounted or wall mounted			
Working Temperature	-20 ℃ ~ 60 ℃			
Storage Temperature	≥25 ℃12 months; ≤35 ℃,6 months; ≤45 ℃,3 months			
Operating / Storage / humidity	≤95% RH			
Warranty	10 years			
IP Rating	IP20			
Cell Technology	$LiFePO_4$,Lithium Iron Phosphate			
Cycle life	6000 Cycles @ 90% DOD / 25 ℃/ 0.5C， 60% EOL			
Scalability	Max 16batteries in parallel			
Ordering and Deliverable Part				
Product ordering part	LVTS 512100 Battery LVTS 512100 Base + Power Cable LVTS 512100 Parallel Cable			

LiFePO4 Battery 25.6V100Ah

Cylindrical Lithium Iron Phosphate Battery

LVT-25.6100

Brief Introduction

LVTOPSUN always develop and produce battery packs to satisfy the requirements of high performance and operational reliability of our customers. We also have a series products to meet all your requirements.

Key Features

- Attractive cycle life
- Extended safety performance
- Wide operating temperature range
- Unrivalled high temperature performance
- Green energy without metal contaminant
- High capacity
- Steady output voltage
- Little self-discharge
- Double safety protection
- Withstanding very high level of vibrations and shocks

Safety Characteristics

- Over-charge/Over-discharge Ability to withstand over-charge/withstand over-discharge, and there is no fire, no exploding and work well
- Short circuit Ability to withstand short circuit, and there is no fire, no exploding
- Acupuncture Ability to withstand nail puncturing, and there is no fire, no exploding
- Thermal shock Ability to withstand thermal shock, and there is no fire, no exploding

- **Electrical Characteristics**

Nominal Voltage	25.6 V
Nominal Capacity	100Ah
Impedance (Max. at1000Hz)	<50mΩ
Expected Cycle Life	Discharge cycle 2000 time＜1C
	Discharge cycle 4000 time＜0.4C

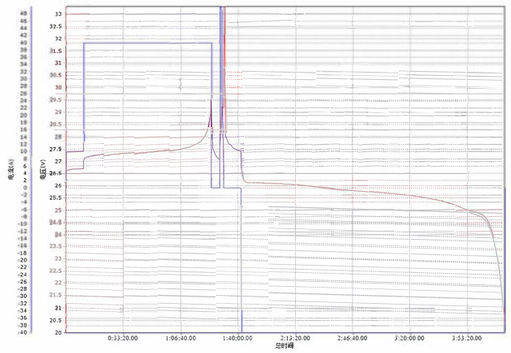
- **Mechanical Characteristics**

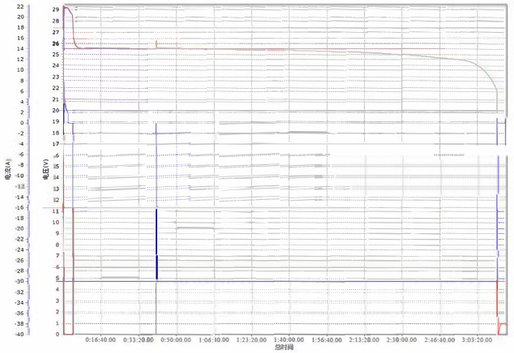
Height	400±2mm
Width	463±2mm
Length	125±2mm
Weight	31Kg

- **Operation Conditions**

Charge Method	Constant Current/Constant Voltage (CC-CV)
Max. Charge Voltage	29.2V
Standard Charge Current	50A
Charge Temperature	0℃～45℃
Max. Continuous Discharge Current	100A
Peak Instant Discharge Current	120A
Peak Instant Discharge Time	115∽173ms
Discharge Cut-off Voltage	20 V
Discharge Temperature	-20℃～65℃
Storage Temperature	-20℃～45℃

Charge and discharge curve





Function of PCM/BMS (Battery Management System)

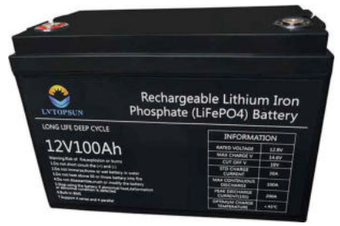
Circuit Protection: LVTOPSUN's cylindrical cells are optimized through the use of its battery management system (BMS), through monitoring cells, to provide protection against overcharge, over discharge, short circuit. Also it enables every battery pack to obtain independent balancing function. Overall, the BMS helps to ensure safe and accurate Operation.

No.	Item	Data		
	Working Environment		20℃～65℃	
2	Continuous Discharge Voltage		2.5－3.65V	
3	Continuous Discharge Current		1C	
4	Current Consume in normal operation		＜2.56W	
5	ELECTRICAL CHARACTERISTICS	Symbol	Content	Criterion
	Over charge Protection	V_{DET1}	Over charge detection voltage	3.75 ＋ 0.025V
		tV_{DET1}	Over charge detection delay time	0.96∽1.4s
		V_{REL1}	Over charge release voltage	3.70 ＋0.050V
	Over discharge protection	V_{DET2}	Over discharge detection voltage	2.5＋0.050V
		tV_{DET2}	Over discharge detection delay time	115∽173ms
		V_{REL2}	Over discharge release voltage	2.7＋0.10V
	Over current protection	I_{DP}	Over current detection current	1.2C
		tV_{DET3}	Detection delay time	9＋2ms
			Release condition	Cut load
	Short protection		Protection condition	Exterior short circuit
			Release condition	Cut short circuit
	Balance	V	Balance Voltage (Start)	3.4
			Balance Current	0.5
	Over Current Protection (Charging)		Charging Current in normally	0.5C
			Charging Protection release condition	Cut off charger

LiFePo4Battery 12V100Ah

Cylindrical Lithium Iron Phosphate Battery

LVT-12100



Brief Introduction

LVTOPSUN always develop and produce battery packs to satisfy the requirements of high performance and operational reliability of our customers. We also have a series products to meet all your requirements.

Key Features

- Attractive cycle life
- Extended safety performance
- Wide operating temperature range
- Unrivalled high temperature performance
- Green energy without metal contaminant
- High capacity
- Steady output voltage
- Little self-discharge
- Double safety protection
- Withstanding very high level of vibrations and shocks

Safety Characteristics

- Over-charge/Over-discharge Ability to withstand over-charge/withstand over-discharge, and there is no fire, no exploding and work well
- Short circuit Ability to withstand short circuit, and there is no fire, no exploding
- Acupuncture Ability to withstand nail puncturing, and there is no fire, no exploding
- Thermal shock Ability to withstand thermal shock, and there is no fire, no exploding

- **Electrical Characteristics**

Nominal Voltage	12.8V
Nominal Capacity	100Ah
Impedance (Max. at1000Hz)	<50mΩ
Expected Cycle Life	Discharge cycle 2000 time＜1C
	Discharge cycle 4000 time＜0.4C

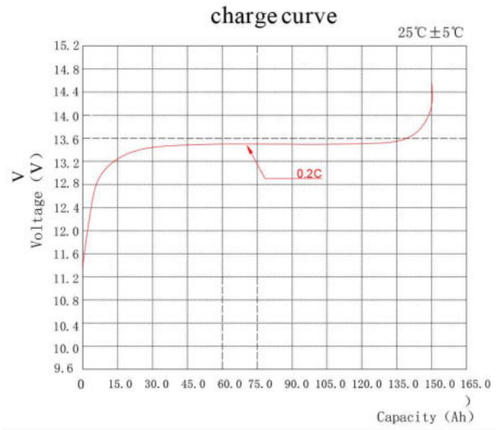
- **Mechanical Characteristics**

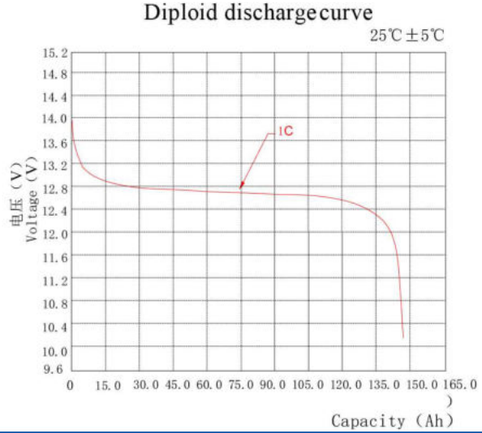
Height	214±2mm
Width	172±2mm
Length	329±2mm
Weight	~12.7Kg

- **Operation Conditions**

Charge Method	Constant Current/Constant Voltage (CC-CV)
Max. Charge Voltage	14.6V
Standard Charge Current	30A
Charge Temperature	0℃～45℃
Max. Continuous Discharge Current	100A
Peak Instant Discharge Current	120A
Peak Instant Discharge Time	115∽173ms
Discharge Cut-off Voltage	8.0V
Discharge Temperature	-20℃～65℃
Storage Temperature	-20℃～45℃

Charge and discharge curve





Function of PCM/BMS (Battery Management System)

Circuit Protection: LVTOPSUN's cylindrical cells are optimized through the use of its battery management system (BMS), through monitoring cells, to provide protection against overcharge, over discharge, short circuit. Also it enables every battery pack to obtain independent balancing function. Overall, the BMS helps to ensure safe and accurate Operation.

No.	Item	Data		
1	Working Environment		-25℃~85℃	
2	Continuous Discharge Voltage		8.0-64±0.025V	
3	Continuous Discharge Current		≤120A	
4	Current Consume in normal operation		＜1W	
5	ELECTRICAL CHARACTERISTICS	Symbol	Content	Criterion
	Over charge Protection	V_{DET1}	Over charge detection voltage	3.75±0.025V
		tV_{DET1}	Over charge detection delay time	0.96∽1.4s
		V_{REL1}	Over charge release voltage	3.6±0.050V
	Over discharge protection	V_{DET2}	Over discharge detection voltage	2.3±0.050V
		tV_{DET2}	Over discharge detection delay time	115∽173ms
		V_{REL2}	Over discharge release voltage	2.7±0.10V
	Over current protection	I_{DP}	Over current detection current	400A
		tV_{DET3}	Detection delay time	9±2ms
			Release condition	Cut load
	Short protection		Protection condition	Exterior short circuit
			Release condition	Cut short circuit
	Balance	V	Balance Voltage (Start)	3.6
			Balance Current	＞40mA
	Over Current Protection (Charging)		Charging Current in normally	≤120A
			Charging Protection release condition	Cut off charger

Storage and Transportation

1. Based on the character of cell, proper environment for transportation of $LiFePO_4$ battery pack need to be created to protect the battery.
2. During transportation,50% SOC must be kept to ensure that short circuit, appearance of liquid in the battery or immersion of battery in liquid never occur.
3. Battery should be kept at -20℃～45℃ in warehouse where it's dry, clean andwell-ventilated.
4. During loading of battery, attention must be paid against dropping, turning over and serious stacking.

Warnings and Tips

In order to prevent the battery leaking, getting hot and exploding, please pay attention to preventing measure as following:

Warning!

- Never throw the battery into water, keep it under dry, shady and cool circumstance when not use.
- Never upside down the positive and negative.
- Never connect the positive and negative of battery with metal.
- Never ship or store the battery together with metal
- Never knock, throw or trample the battery.
- Never cut through the battery with nail or other edge tool.

Tips!

- Never use or keep the battery under the high temperature. Otherwise it will cause battery heat, get into fire or lose some function and reduce the life. The proposed temperature for long-term storage is 10-45℃.
- Never throw the battery into fire or heating machine to avoid fire, explosion and environment pollution; scrap battery should be returned to the supplier and handled by the recycle station.
- Never use the battery under strong static and strong magnetic field, otherwise it will destroy the protecting device.
- If battery leaked, the electrolyte get into eyes, please don't knead, please wash eyes by water and send to hospital. Otherwise it will hurt eyes.
- If battery emit peculiar smell, heating, distortion or appear any unconventionality during using, storage or charging process, please take it out from device or charge and stop using.
- Never cut the battery in socket directly; please use the stated charger when charging.
- Check the voltage of battery and relevant connectors before using the battery. It can't be used until everything turns out to be normal.
- Prior to charging, fully check the insulativity, physical condition and ageing status, since breakage and ageing are never allowed; the pack voltage must not be less than the cutoff voltage, if not, it's abnormal and that battery needs to be labeled. The user should contact our Customer Service Dept and it can't be charged until repaired by our staff.
- The battery should be stored in full SOC. It needs to be charged once if batteries not used for a bout half a year.
- Clean the dirty electrode, if any, with a clean dry cloth, or poor contact or operation failure may occur.

MAJOR PRODUCT
GEL BATTERY

LVTOPSUN GEL BATTERY

GERMANY TECHNOLOGY

MASTETR ADVANCED TECHNOLOGY

3Years Warranty

LVTOPSUN Gel Battery Technical Advantage

- Germany Gel Technology ,no Water Loss And Long Life
- Nanometer lock acid technology , no acid leakage ,green and and enviroment friendly

Battery for Solar Power

Battery for Standby

Battery Model

12V Series

6-GFM-55
6-GFM-100
6-GFM-150
6-GFM-200
6-GFM-250

2V Series

GFM-600

GFM SERIES VRLA GEL BATTERY

Products Features

Carbon material with superhigh specific surface area and conductivity for negative plates

German gel technology and AGM separators, low internal resistance, and high discharge performance at high C-rates.

Special alloy for positive plates, stringently controlled impurity contents, and low self-discharge rate.

Highlights

Long life design(up to 12 years)
Reliably sealed
High specific energy, low IR & self discharge
Higher reaction efficiency and conformity

Applications

Energy storage for solar and standby power
Energy stoarge power for Hybrid inverterts

Certifications

Solar Valley

Home Photovoltaic System

OFF-GRID PV station

Network server

Electrical equipment

Mobile Tower

SPECIFICATIONS
12V SERIES

Model	Rated Voltage (V)	Capacity (AH)	Dimensions(MM)				Weight (KG)	Screw Size
			L	W	H	TH		
6-GFM-55	12	55	262.5	165	169.5	169.5	16.5	M6*8

Model	Rated Voltage (V)	Capacity (AH)	Dimensions(MM)				Weight (KG)	Screw Size
			L	W	H	TH		
6-GFM-100	12	100	331	172	215	218	30	M8*20

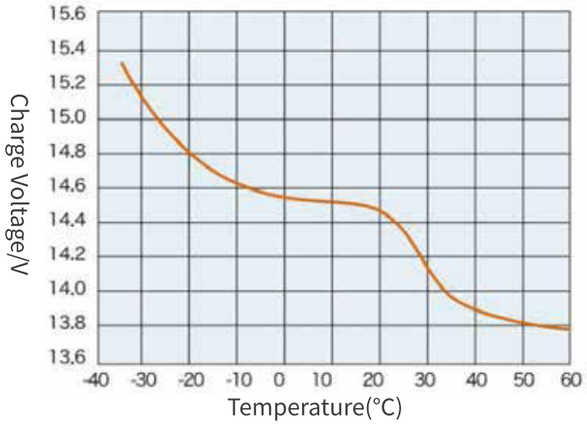
Model	Rated Voltage (V)	Capacity (AH)	Dimensions(MM)				Weight (KG)	Screw Size
			L	W	H	TH		
6-GFM-150	12	150	483	170	231	239	43	M8*20

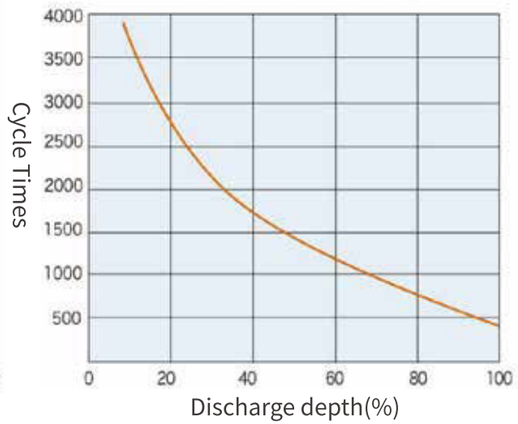
Model	Rated Voltage (V)	Capacity (AH)	Dimensions(MM)				Weight (KG)	Screw Size
			L	W	H	TH		
6-GFM-200	12	200	521	241	220	220	58	M8*20

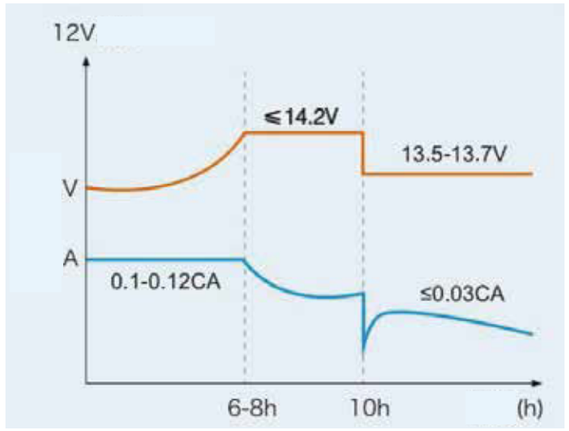
Model	Rated Voltage (V)	Capacity (AH)	Dimensions(MM)				Weight (KG)	Screw Size
			L	W	H	TH		
6-GFM-250	12	250	521	272	219	226	71	M8*20

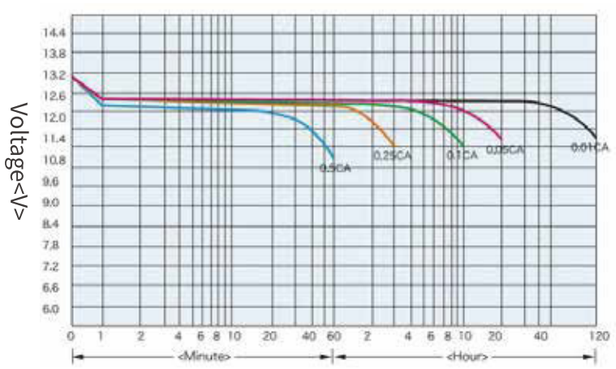
Model	Rated Voltage (V)	Capacity (AH)	Dimensions(MM)				Weight (KG)	Screw Size
			L	W	H	TH		
GFM-600	2	600	302	176	330	336	33	M6*8

PERFORMANCE



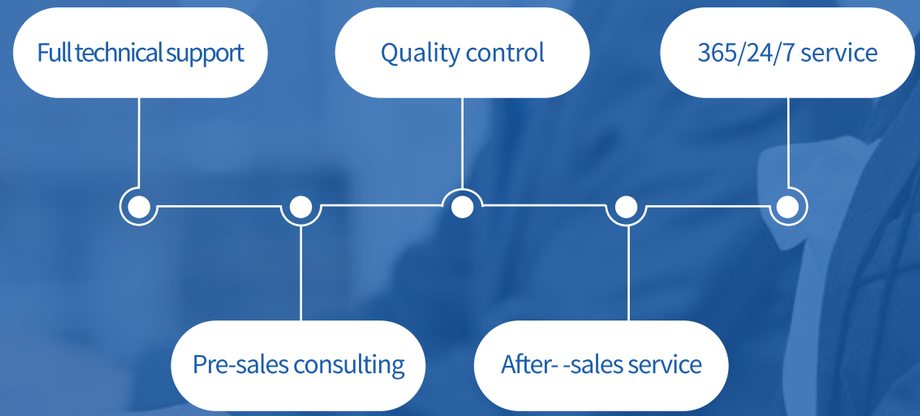


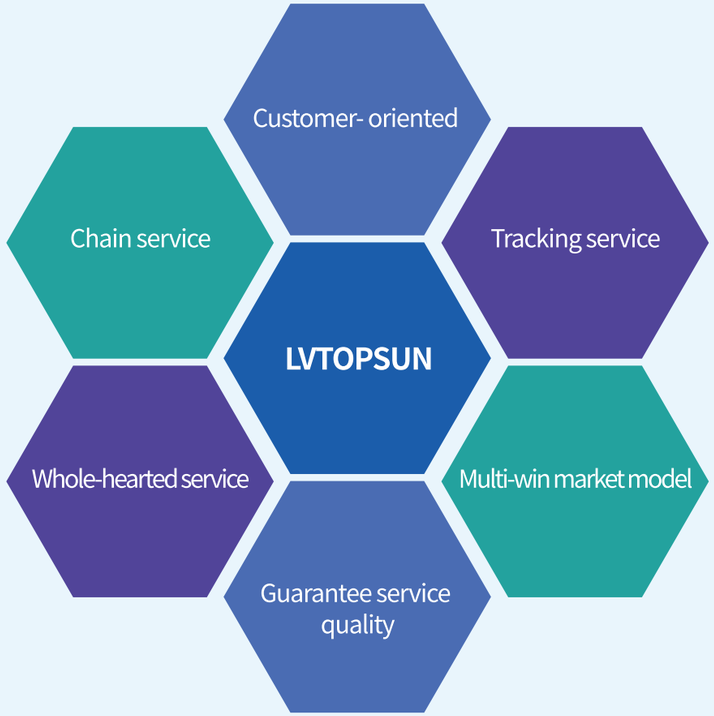




Discharge time

AFTER SALES SERVICE





Service creates value, service wins respect, service builds brand