



GREENFAITH

LiFePO₄ Battery
Energy Storage Product Brochure

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Focusing On Providing High-quality Solutions For Household Energy Storage And Industrial Energy Storage



Factory Overview



1-LiFePO4 Cells Capacity Grading

Difference of internal resistance <math>< 2 \text{ m}\Omega</math>
Difference of capacity <math>< 50\text{mAh}</math>
Difference of voltage <math>< 10 \text{ mV}</math>



2-Cells Module Assembly



3-Cells Module pack resistance testing

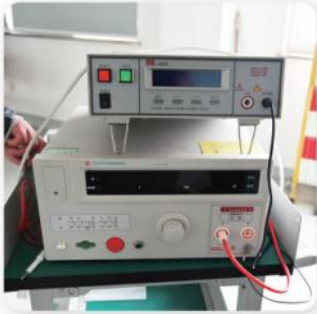


4-Battery Pack Assembly



5-Dielectric Voltage-Withstand Tests (Hipot)

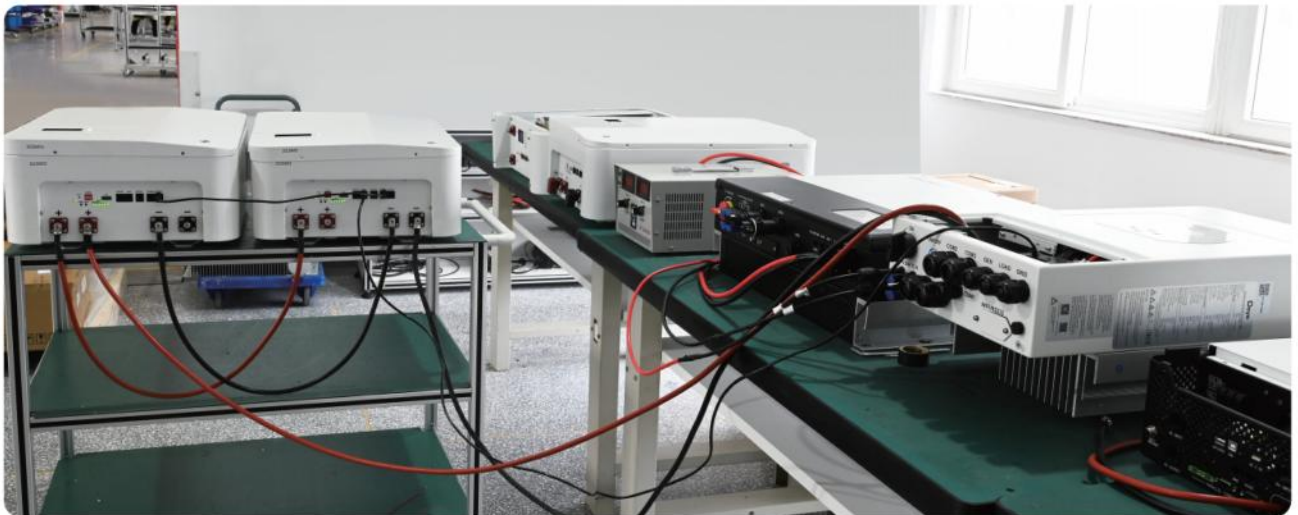
Voltage at 1500VDC, Leakage Current 0.02mA.
Voltage at 1000VDC, Insulation resistance of 1000MΩ.



6-Battery Pack Aging Test



7-Inverter Compatibility Test



8-Battery Packaging



9-Shipping



Rack-mounted energy storage (Home/Industrial)

Pack modular design, strong universality, convenient installation, simple operation, independent maintenance, high reliability, safety, large space, conducive to ventilation and heat dissipation, is the main component of household power supply, lithium iron phosphate battery has a long life, enough stability, more security and other characteristics.



Safe



Easy Mounting



Independent Maintenance



Good Heat Dissipation



Model	LFR-4850/5150	LFR-48100/51100	LFR-48150/51150	LFR-48200/51200
Standard Voltage	48Vdc/51.2Vdc			
Voltage	39.75-54.75Vdc/42.4-58.4Vdc			
Norminal Capacity	50Ah	100Ah	150Ah	200Ah
Rated Energy Capacity	2.4/2.56kWh	4.8/5.12kWh	7.2/7.68kWh	9.6/10.24kWh
Communcation Protocol	CAN/RS485/WIFI/4G/Blue Tooth			
Efficiency (at 0.5C)	98%			
Cell Self-Discharge	<5 %/ Month			
Maximum Units in Parallel	15 (36/38.4kWh)	15 (72/76.8kWh)	15 (108/115.2kWh)	15 (144/153.6kWh)
Depth of Discharge	Up to 100%			
Useful Life	8-10 Years			
Cycle Life	6000 (@ 80% DoD)			
Protection	Over temperature, over current, short circuit, over-charging, over-discharging, Low voltage			
Charge Specifications				
Recommended Charge Current	25A	50A	75A	100A
Maximum Charge Current	50A	100A	100A	100A
Recommended Charge Voltage	54/57.6V	54/57.6V	54/57.6V	54/57.6V
Maximum Charge Voltage	54.75/58.4V	54.75/58.4V	54.75/58.4V	54.75/58.4V
Discharge Specifications				
Recommended Discharge Current	25A	50A	75A	100A
Maximum Discharge Current	50A	100A	100A	100A
Recommended Voltage Disconnect	41.25/44V			
Battery Low Voltage Protection	39.75/42.4V			
Battery Recovery Voltage	45/48V			
Mechanical Specifications				
Dimenstions	484*330*165mm	484*425*176.5mm	520*773*164.5mm	484*750*240mm
Weight	24.5/26.5kg	38.5/41kg	59/63kg	70.5/75kg
Terminal Type	M6			
Case Material	Industrial Grade Iron			
Enclosure Protection	IP20			
Installation	Cabinet			
Cell Type Chemistry	LiFePO4			
Compliance Specifications				
Certifications	CE,FCC, CCC			
Shipping Classification	UN 38.3. UN 3480, Class 9			
Temperature Specifications				
Discharge Temperature	-20~65 °C	-20~65 °C	-20~65 °C	-20~65 °C
Charge Temperature	0~55 °C	0~55 °C	0~55 °C	0~55 °C
Storage Temperature	-20~45 °C	-20~45 °C	-20~45 °C	-20~45 °C

Wall Mounted energy storage (Home)

Light and convenient household energy storage option, light weight, small size, integrated body design, plug and play, easy installation, more convenient space optimization energy storage scheme.



Long Life



Mobility



Space Saving



Home Appliance Style



Model	LFW-48100/51100	LFW-48150/51150	LFW-48200/51200
Standard Voltage	48VDC/51.2VDC		
Voltage	39.75-54.75VDC/42.4-58.4VDC		
Nominal Capacity	100Ah	150Ah	200Ah
Rated Energy Capacity	4.8/5.12kWh	7.2/7.68kWh	9.6/10.24kWh
Communication Protocol	CAN/RS485/WIFI/4G/Blue Tooth		
Efficiency (at 0.5C)	98%		
Cell Self-Discharge	<5 %/ Month		
Maximum Units in Parallel	15 (72/76.8kWh)	15 (108/115.2kWh)	15 (144/153.6kWh)
Depth of Discharge	Up to 100%		
Useful Life	8-10 Years		
Cycle Life	6000 (@ 80% DoD)		
Protection	Over temperature, overcurrent, short circuit, over-charging, over-discharging, Low voltage		
Charge Specifications			
Recommended Charge Current	50A	75A	100A
Maximum Charge Current	100A	100A	100A
Recommended Charge Voltage	54/57.6V	54/57.6V	54/57.6V
Maximum Charge Voltage	54.75/58.4V	54.75/58.4V	54.75/58.4V
Discharge Specifications			
Recommended Discharge Current	50A	75A	100A
Maximum Discharge Current	100A	100A	100A
Recommended Voltage Disconnect	41.25/44V		
Battery Low Voltage Protection	39.75/42.4V		
Battery Recovery Voltage	45/48V		
Mechanical Specifications			
Dimensions	510*440*220mm	690*530*215mm	690*530*215mm
Weight	50/53.5kg	70/75kg	90/96kg
Terminal Type	M6		
Case Material	Industrial Grade Iron		
Enclosure Protection	IP20		
Installation	Cabinet or Wall installation		
Cell Type Chemistry	LiFePO4		
Compliance Specifications			
Certifications	CE,FCC, CCC		
Shipping Classification	UN 38.3. UN 3480, Class 9		
Temperature Specifications			
Discharge Temperature	-20~65 °C	-20~65 °C	-20~65 °C
Charge Temperature	0~55 °C	0~55 °C	0~55 °C
Storage Temperature	-20~45 °C	-20~45 °C	-20~45 °C

Stacked energy storage (Home)

Integrated household appliance design is adopted, which is exquisite and beautiful and easy to install. Modular stack design, flexible matching of energy storage unit, capacity expansion on demand, integrated inverter, convenient and portable, strong mobility, saving household electricity costs.



Long Life



Mobility



Space Saving



Home
Appliance Style



Model	LFS 5kw+5.12kwh	LFS 5kw+10.24kwh	LFS 5kw+15.36kwh	LFS 5kw+20.48kwh	LFS 5kw+25.6kwh
Lithium battery					
Single module capacity	5.12kwh				
Module number	1pcs	2pcs	3pcs	4pcs	5pcs
Total energy capacity	5.12kwh	10.24kwh	15.36kwh	20.48kwh	25.6kwh
Standard voltage	51.2V				
Working voltage	43.2v-57.6V				
Standard discharge current	100A	200A	300A	400A	500A
Standard charging current	50A	100A	150A	200A	250A
Suggested DOD	80%				
Humidity	20%-60%				
Installation	Stacked				
IP rating	IP20				
Communication	CAN/RS485/RS232(WIFI,bluetooth is optional and need extra cost)				
Product size/unit	550*500*185mm				
N.W./unit	40kg				
Battery Input					
Battery type	LFP				
Rated Battery Input Voltage	51.2V (Minimum Startup Voltage 44V)				
Hybrid Charging Max Charging Current	80A				
Battery Voltage Range	40Vdc-60Vdc ± 0.6Vdc(Under voltage Warning/Shutdown Voltage/Over voltage/Warning/Over voltage Recover y...)				
Solar Input					
Maximum PV Open-circuit Voltage	500Vdc				
PV Working Voltage Range	120-500Vdc				
MPPT Voltage Range	120-450Vdc				
Maximum PV Input Current	18A				
Maximum PV Input Power	5200W				
Maximum PV Charging Current	80A				
AC Input (generator/grid)					
Mains Maximum ChargingCurrent	60A				
Rated Input Voltage	220/230Vac				
Input Voltage Range	UPS Mains Mode: (170Vac~280Vac)±2% APL Generator Mode: (90Vac-280Vac)±2%				
Frequency	50Hz/ 60Hz (Automatic Detection)				
Mains Charging Efficiency	>95%				
Switch Time (bypass and inverter)	10ms(Typical Value)				
Maximum Bypass Overload Current	40A				
AC Output					
Output Voltage Waveform	Pure Sine Wave				
Rated Output Voltage (Vac)	230Vac (200/208/220/240Vac)				
Rated Output Power (VA)	5000 (4350/4500/4800/5000)				
Rated Output Power(W)	5000 (4350/4500/4800/5000)				
Peak Power	10000VA				
On-load Motor Capacity	4HP				
Output Frequency Range(Hz)	50Hz±0.3Hz/60Hz±0.3Hz				
Maximum Efficiency	>90%				
No-load Loss	Non Energy-saving Mode: ≤50W Energy-saving Mode: ≤25W (Manual Setup)				

High voltage Rack-mounted energy storage (Home/Industrial)

High-voltage rack-mounted home energy storage, PACK modular design, strong versatility, convenient installation, simple operation, and can be independently maintained. High reliability and safety, large space, conducive to ventilation and heat dissipation, it is an important component of home power supply. Lithium iron phosphate batteries have Long life, stable enough, safer and other characteristics.



Safe



Easy Mounting



Independent Maintenance



Good Heat Dissipation



Model	LFH51100		LFH51200		LFH10050
Battery pack parameter					
Cell type	LFP				
Nominal Voltage	51.2V		51.2V		102.4V
Nominal Capacity	100Ah		200Ah		50Ah
Rated capacity	5.12kWh		10.24kWh		5.12kWh
Max Charging/Discharging rate	1C/100A		0.5C/100A		1C/50A
Size	421*480*165mm		773*560*165mm		421*480*180mm
Weight			80kg		40kg
Usage	8-10 Years				
Life Cycle	6000 (@ 80% DoD)				
Stackable pc(s)					
Max Stackable pc(s)	8 PCS	12 PCS	8 PCS	12 PCS	6 PCS
Nominal Voltage	409.6V	614.4V	409.6V	614.4V	614.4V
Work Voltage	345.6-460.8V	518.4-691.2V	345.6-460.8V	518.4-691.2V	518.4-691.2V
Relevant capacity	40.93kWh	61.44kWh	81.92kWh	122.88kWh	30.72kWh
General Parameter					
Cabinet Size	506*556*1835 mm	506*556*2410 mm	826*636*1723 mm	826*636*2410 mm	506*556*1835 mm
Cabinet Weight	75kg	98kg	95kg	130kg	75kg
Case Material	Industrial Grade Iron				
Enclosure Protection	IP20				
Installation	Cabinet				
Communication	CAN/RS485(WIFI,bluetooth is optional and need extra cost)				
Certifications	CE,FCC, CCC				
Shipping Classification	UN 38.3. UN 3480, MSDS				

Floor Standing Energy Storage(Home)

Floor standing home energy storage, a convenient home energy storage option, high mobility, integrated body design, plug and play, easy installation, A more convenient space-optimized energy storage solution.



Long Life



Mobility



Space Saving



Home Appliance Style



Model	LFF51280
Nominal Voltage	51.2VDC
Voltage Range	43.2-57.6VDC
Nominal capacity	300Ah
Rated Energy Capacity	15.35kWh
Communication	CAN/RS485/WIFI/Bluetooth
Charging/Discharging rate(0.5C)	90%
Battery Cell self discharge rate	<5%/Month
Max Parallel	15 (230.4kWh)
DOD	90%
Usage	8-10 Years
Cycle life	6000 (@ 80% DoD)
Protection system	Over-heated protection, Over-current protection, Short circuit protection, Over-charge protection, Over-discharge protection, Low-voltage protection
Charge/discharge parameter	
Recommended Charging current	100A
Max Charging Current	200A
Recommended Charging Voltage	57.6V
Recommended Discharging Voltage	100A
Max Discharging Voltage	200A
Cut-off Discharging Voltage	43.2V
General parameter	
Size	850*530*250mm
Weight	125kg
Terminal type	M8
Case Material	Industrial Grade Iron
Enclosure Protection	IP20
Installation	Floor Standing
Battery Cell Type	LFP
Temperature parameter	
Discharge Temperature	-20-60 °C
Charge Temperature	0~55 °C
Charge Temperature	-20~55 °C
Compliance Specifications	
Certifications	CE, FCC, CCC
Shipping Classification	UN 38.3. UN 3480, MSDS

Energy Storage System All-in-one (Home)

Integrated inverter integrated design, easy to use, no installation required, multiple charging methods, can be connected to photovoltaic and mains power, mobile, wall-mounted Hanging, indoor and outdoor scenes can be flexibly switched to more conveniently serve daily electricity consumption.



Long Life



Mobility



Space Saving



Home Appliance Style



Model	LFA3000	
AC Output	Output Power	Pure sine wave
	Output waveform	Pure sine wave
	Frequency	
	Output Voltage	
	Output Socket Type	Multiple(US、 AU、 JP、 EU etc.)
	Soft Start	Output Socket Type
	waveform distortion	
	Protection	Under voltage protection, over-voltage protection, over-temperature protection, short-circuit protection,Anti reverse connection protection
Parallel	Andersen	Parallel:2
Communication		WIFI
AC input	Grid	230AV(50Hz/60Hz)
Switch		AC inverter switch/DC Battery switch
Display	Display item	LED smart display
Lithium battery	Battery type	100Ah LFP cell
	Nominal Energy capacity	25.6V/100Ah
	Voltage Range	21.6V-28.8V
	Min Charge	5A
	Max Continues Charge Current	100A
	Max Continues Discharge Current	100A
	Max Pulse Charge Current	100A(1S)
	Life cycle	6000 cycle@80%DOD(25℃)
Cooling		Smart air cooling
Work Temperature		-20-60℃
Storage Temperature		-20-55℃
Humidity		90% Max. No condensation
Usage		8-10 Years
Size		410*840*195mm
Weight		50kg
Compliance Specifications		
Certifications	CE,FCC, CCC	
Shipping Classification	UN 38.3, UN 3480,MSDS	

Lead Acid Replacement Batteries (Home/Industrial)

Lead-acid batteries are widely used, but because of their high maintenance costs, short battery life and great environmental pollution, they are gradually replaced by lithium ion batteries. Lithium iron phosphate battery with the same volume has higher energy density and lighter weight, which is the best alternative to lead acid.



Safe



Long Life



Light Weight



IP67



Model	LFD-1212	LFD-3012	LFD-5012	LFD-10012	LFD-13012	LFD-20012	LFD-10024	LFD-10048
	12V12Ah	12V30Ah	12V50Ah	12V100Ah	12V130Ah	12V200Ah	24V100Ah	48V100Ah
Continuous Discharge Current	8A	15A	25A	50A	65A	100A	50A	50A
Peak Protection Current	16A	30A	50A	100A	130A	200A	100A	100A
Working Voltage	10-14.6V						20-29.2V	37.5-54.75V
Standard Voltage	12.8V						25.6V	48V
Continuous Work Current	8A	15A	25A	50A	65A	100A	50A	50A
Max Charge Voltage	14.6V						29.2V	54.75V
Max Units in Series	4						2	N
Suggested DoD Model	80%							
Size(mm)	155*99*94	195*133*171	229*138*208	256*165*210	330*172*215	521*238*218	345*190*245	520*267*220
Weight	1.5kg	3.2kg	4.5kg	10kg	13kg	19kg	22kg	33kg
Humidity	≤85%							
Cooling Type	Natural Cooling							
IP	IP67							
Useful Life	8-10 Years							

Indoor and Outdoor Energy Storage Cabinets (Home/Industrial)

Flexible configuration, convenient installation; remote monitoring, real-time attention Seamless switching, multiple modes; advanced protection, safe and worry-free.



Safe and reliable



Highly Integrated



Cost Effective



Intelligent and friendly



Model	LFO20kW50kWh	LFO30kW60kWh
Battery Parameter		
Battery Cell Type	LFP	
Single Module Capacity	10.24kWh	
Layer Pc(s)	5PCS	6PCS
Nominal capacity	51.2kWh	61.4kWh
Nominal Voltage	512V	614.4V
Work Voltage	432-576V	518.4-691.2V
Recommended DOD	80%	
Humidity	20%~60%	
Installation Rack	Rack type	
Communication	CAN/RS485(WIFI,bluetooth is optional and need extra cost)	
Size/Layer	773*560*165mm	
Net Weight/Layer	80kg	
PV Input Parameter		
Max PV Open Circuit	1000VDC	1000VDC
PV Start Voltage	180VDC	180VDC
MPPT Voltage Range	150-850VDC	150-850VDC
PV Input Current	26+26A	36+36+36A
Max PV Input Current	39+39A	55+55+55A
PV input Power	26000W	39000W
AC Output Parameter		
Rated output Current	30A	45A
Rated output Voltage	220/380VAC, 230/400VAC	
Frequency	50Hz/60Hz(Automatic detection)	
Rated Output Power	20000W	30000W
Utility type	three phase	
Max by-pass Current	80A	200A
System Parameter		
Size	1170*1031*1636mm	
IP Class	IP54	
Work Temperature	0~55 C	
Storage Temperature	-20-55 C	
Cooling	Air cooling/natural cooling	
Compliance Specifications		
Certifications	CE,FCC, CCC	
Shipping Classification	UN 38.3, UN 3480, MSDS	

Container Energy Storage (Industrial)

Economical and efficient: peak shaving and valley filling, efficient conversion, deep power supply, and seamless switching

Safe and reliable: real-time monitoring, perfect mechanism, multi-level protection, comprehensive management

Intelligent interaction: multiple modes, intelligent management and control, real-time monitoring, quick response.



Safe and reliable



Cost Effective



Intelligent and friendly



Model	LFC525	LFC1051
Battery Parameter		
Battery Model	3.2V120Ah	3.2V120Ah
System Battery Configuration	228S6P	228S12P
Rated Capacity	525kWh	1051kWh
Voltage Range	616-832V	616-832V
BMS Communication Interface	Ethernet, RS485	
BMS Protocol	Modbus RTU, Modbus TCP	
AC Side Parameter		
Rated Power	250kWh	250kWh
MAX Output	275kWh	275kWh
THID	<3% (At rated power)	
DC Component	<0.5%(At rated power)	
Rated Output Voltage	400V	
Grid Voltage Range	310-450V	
Power Factor	>0.99 (At rated power)	
Adjustable Range of Power Factor	0.9 (Leading) -0.9 (Lagging)	
Rated Grid Frequency	50Hz	
Power Grid Frequency Range	45-55Hz	
Isolation Way	Transformer Isolation	
Off Grid Rated Output Voltage	400V	
Distortion Rate of Off Grid Output Voltage	<3% (Linear Load)	
System Parameter		
Inverter Carton Size	600*900*1500mm	600*900*1500mm
Battery Container Size	600*600*2000mm	600*600*2000mm
Weight of Converter Container	2.8T	2.8T
Weight of battery container (With battery/Without battery)	9.6T/5.0T	(9.6T/5.0T)*2
IP Code	IP54	
Operating Temperature Range	-30~+50℃	
Operating Humidity Range	0~95% (Non-condensing)	
Max Working Altitude	2000m(>2000m Frequency reduction required)	
Battery Temperature Control Mode	Industrial temperature controlled air conditioner	
Inverter Cooling Mode	Temperature controlled forced air cooling	
Fire Alarm System (Battery Container)	FM200	
System Communication Interface	Ethernet,RS485	
System Communication Protocol	Modbus RTU, Modbus TCP, IEC 104	



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