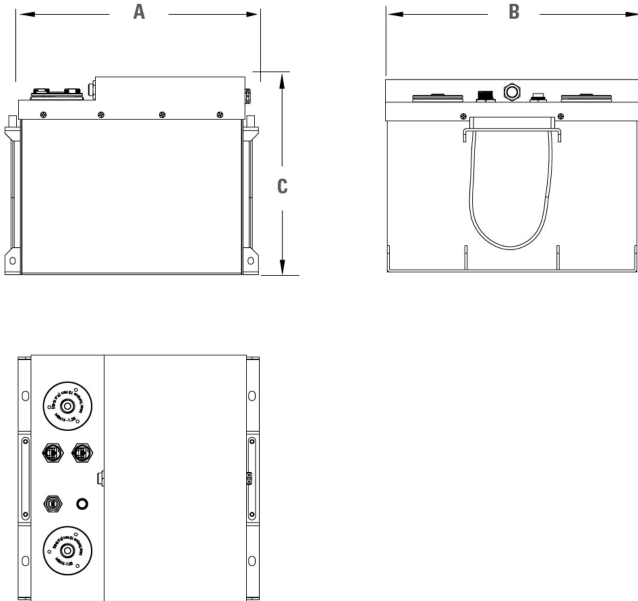




AES LiFePO₄ Solar Stationary Battery

Discover® Advanced Energy System (AES) LiFePO₄ Lithium solar batteries offer bankable performance and the lowest cost of energy storage per kWh. AES LiFePO₄ Lithium batteries are manufactured with the highest-grade LiFePO₄ cells and feature a proprietary high peak surge and transient voltage hardened BMS that delivers superior peak power, lightning fast charge and discharge rates and LYNK Solar Gateway functionality for plug-and-play closed loop integration with the worlds best known off-grid inverters and chargers turning a good system into a great one.

MECHANICAL DRAWINGS



MECHANICAL SPECIFICATIONS

Length A (in/mm)	13.0	330
Width B (in/mm)	13.3	339
Height C (in/mm)	10.1	256
Total Height D (in/mm)	10.1	256
Weight (lbs/kgs)	88.0	40.0
Terminal*	M8	
Cell(s)	16S15P	
Case Material	Steel	
IP Rating	55	
Electrolyte	LiFePO ₄	

*TERMINAL TORQUE: 9 Nm +/- 3 / 6.64ft-lb

ELECTRICAL SPECIFICATIONS

Open Circuit Voltage (V)	51.2
Nominal Energy (kWh)	2.92
Useable DoD	100%
Rated Ah Capacity (1C)	57
Charge Voltage (Vdc)	54.4
Max Voltage (Vdc)	58.4
Min Voltage (Vdc)	44.8
Max Continuous Charge Current (Adc)	57
Max Continuous Discharge Current (Adc)	57
Max. Peak Current (Adc)	219
Self Discharge (25°C / 77°F)	< 3% per month (Battery Off)
Charge Temperature	Min: 0°C (32°F) Max: 45°C (113°F)
Discharge Temperature	Min: -20°C (-4°F) Max: 50°C (122°F)
Storage Temperature	Min: -10°C (14°F) Max: 30°C (86°F)

Electrical Specifications at 25°C.

* Do not exceed maximum voltage at the battery terminals.

CAUTION: Extra considerations must be given to depths of discharge, operating voltages and currents when designing systems for use at maximum operating temperatures.

FEATURES

LYNK PORT

- Connects battery string to LYNK Gateway
- Multi-battery BMS communication

HIGH-CURRENT BMS

- Field serviceable BMS and fuse protection
- Plug and Play system wide BMS communication
- Sets Voltage, broadcasts SoC and temperature

AES DASHBOARD

- Battery diagnostic software for PC
- Data export kWh, fault logs to PC
- Update battery BMS firmware

ACCESSORIES

LYNK SOLAR GATEWAY

- Integrated closed-loop communications with the world's best inverter chargers
- Plug and play charger configuration

BENEFITS

ENHANCED RUNTIME

- Double the high-current runtime of lead-acid battery
- Up to 100% usable capacity
- Up to 100% depth of discharge

EXTENDED SERVICE LIFE

- 10x the life of lead-acid battery (BCI-06)
- Unlimited Partial State of Charge cycles
- 10-year energy throughput warranty

FAST CHARGING

- Up to 5x faster than new lead-acid batteries
- Up to 10x faster than aged lead-acid batteries
- 2X faster charging than C/2 Rated lithium batteries
- 1C continuous charge rate, regardless of SoC

SURGE POWER

- Power for off-grid inverter surge demands
- Up to 3C peak power discharge rate
- 1C continuous discharge rate

HIGH-EFFICIENCY

- Up to 50% more energy efficient than a lead-acid battery
- Up to 98% round-trip efficiency

DYNAMIC PERFORMANCE

- Real-time optimization of the charge rate
- Faster recharge from 0% to 100% SoC than lead-acid battery

PARALLEL POWER

- Easy to parallel more capacity
- Linear scaling of charge, discharge and peak capacity
- Parallel up to 20 batteries or 160 kWh per LYNK device

QUICK INSTALL

- Fast installation. No special tools
- Drop-in lead-acid replacement

RELIABLE AND SAFE

- LiFePO₄ is thermally safe
- Maintenance-free
- Steel case and cover
- IP 55 rated

CERTIFIED QUALITY

Discover® manufacturing facilities are fully certified to ISO 9001/14001 and OSHA 18001 standards.

CERTIFICATION STANDARDS

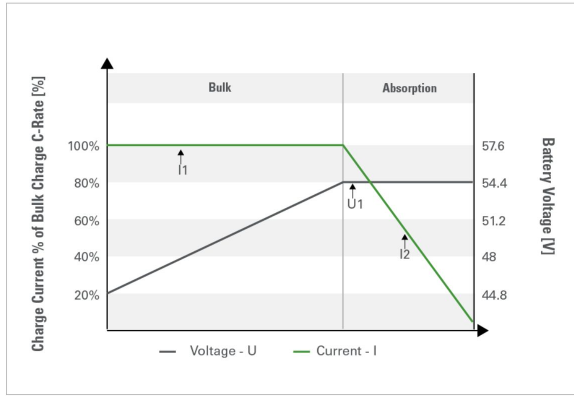
- IEC 62619
- UL 1973
- CE
- UN 38.3

SHIPPING CLASSIFICATION

- UN 3480, Class 9 (Lithium batteries)

Minutes of Discharge				
@25A	@56A	@75A	@85A	@100A
136	61	45	40	34

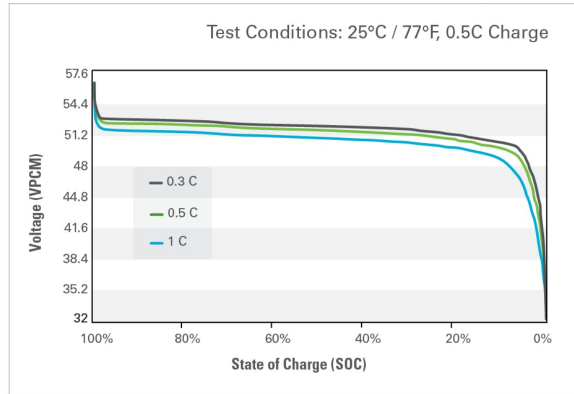
VOLTAGE REGULATED IU CURVE ^a



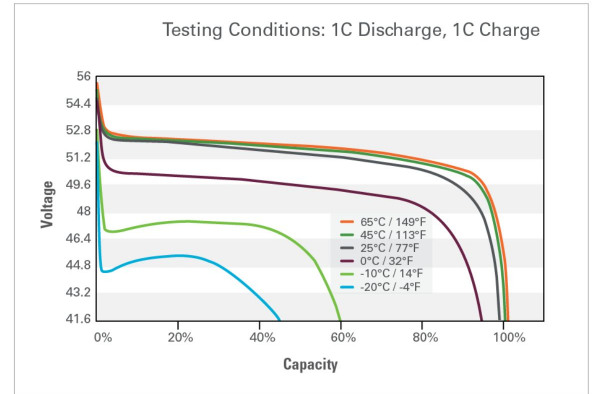
VOLTAGE REGULATED IU CHARGING CURVE PARAMETERS

Nominal Voltage	48 V
Bulk Current (I1)	57 Adc maximum
Absorption Voltage (U1)	54.4 V
Termination Charge Current	$I_2 \leq 1\% C_1$ Capacity

VOLTAGE IN RELATION TO THE STATE OF CHARGE (SOC)



DISCHARGE VOLTAGE IN RELATION TO THE TEMPERATURE



CAUTION:

Direct connection to DC motors without proper safety protection, motor controllers, and external motor voltage clamping systems (such as high power anti-parallel diodes or braking resistor systems) may result in damage to the internal pack