

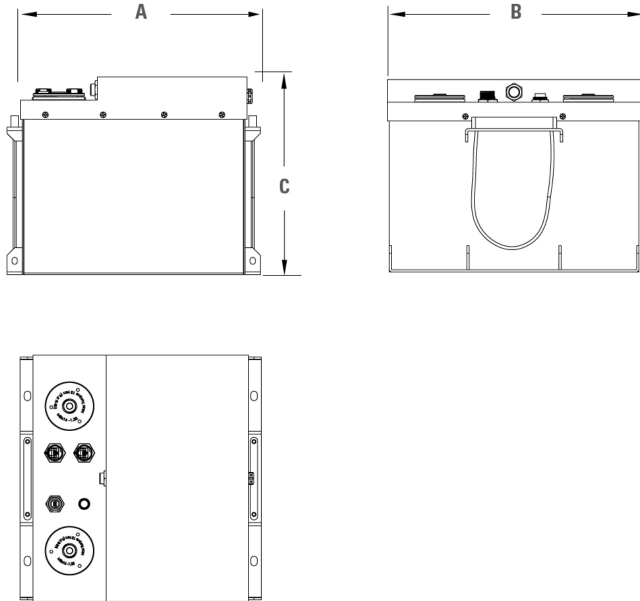


## AES LiFePO<sub>4</sub> Solar Stationary Battery

Discover® Advanced Energy System (AES) LiFePO<sub>4</sub> Lithium solar batteries offer bankable performance and the lowest cost of energy storage per kWh. AES LiFePO<sub>4</sub> Lithium batteries are manufactured with the highest-grade LiFePO<sub>4</sub> 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.

[Download Firmware](#)

### MECHANICAL DRAWINGS



### MECHANICAL SPECIFICATIONS

OLD JIS		
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
Container/Case	—	
Terminal	M8	
Cell(s)	16S15P	
Poles per Cell		
Electrolyte (S.G. / Chem.)	-	

### PERFORMANCE SPECIFICATIONS

Amp Hours (AH)						
1 HR	3 HR	5 HR	10 HR	20 HR	100 HR	120 HR
57						

### ELECTRICAL SPECIFICATIONS

Open Circuit Voltage	-
Energy (kWh)	2.92
Nominal Energy (kWh)	2.92
Useable DoD	100%
Rated Capacity (Ah)	57
Charge Voltage	54
Max Voltage (Vdc)	58.4
Min Voltage (Vdc)	44.8
Max Discharge Rate (Adc)	57
Max Peak Current (Adc)	219
Self Discharge (20°C / 68°F)	< 3% per month (Battery Off)

### Minutes of Discharge

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

### 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
- 99% 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

- LiFePO<sub>4</sub> 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.

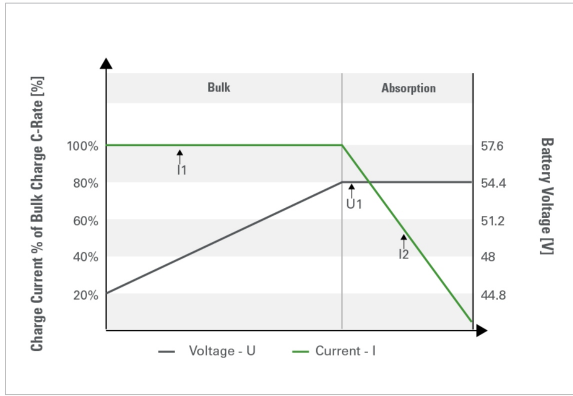
#### CERTIFICATION STANDARDS

- IEC 62619
- UL 1973
- CE
- UN 38.3

### SHIPPING CLASSIFICATION

- UN 3480, Class 9 (Lithium batteries)

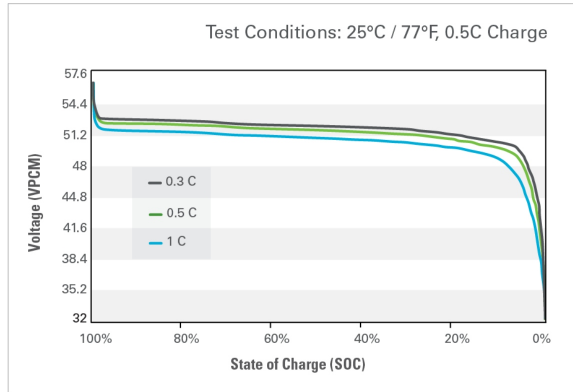
## VOLTAGE REGULATED IU CURVE <sup>a</sup>



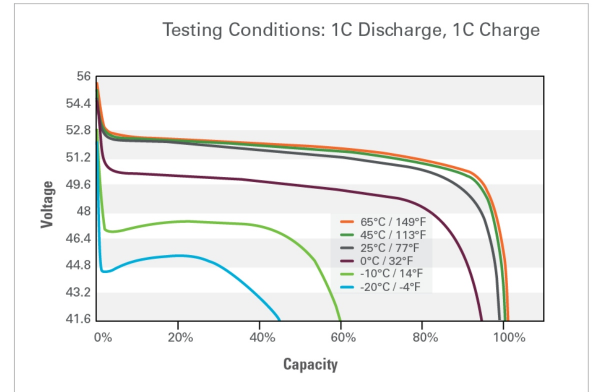
## VOLTAGE REGULATED IU CHARGING CURVE PARAMETERS

Nominal Voltage	48 V
Bulk Current ( $I_1$ )	57 Adc maximum
Absorption Voltage ( $U_1$ )	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 protection system which may result in unsafe situations. Please consult Discover technical support before directly connecting any motor loads.