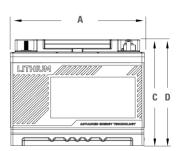
Innovative Battery Solutions

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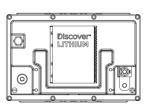


LITHIUM BLUE Battery

Discover®LITHIUM BLUE LiFePO₄ Premium Series batteries offer BMS controlled safety, long life, lightning fast charging performance and real-time Bluetooth access to battery State of Charge, voltage, current, temperature status. LITHIUM BLUE batteries reflect Discover's Design for Excellence philosophy, incorporating suitcase style carrying handles, terminal protection and field serviceable fuses. LITHIUM BLUE batteries are safe, easily to install and parallel for more







5/16 UNC

TERMINAL

MECHANICAL SPECIFICATIONS

Industry Reference	BCI: Low G24R DIN: Tall H6 JIS: D26L		
Length A (in/mm)	10.3	262	
Width B (in/mm)	6.9	175	
Height C (in/mm)	8.3	210	
Total Height D (in/mm)	8.3	210	
Weight (lbs/kgs)	25.3	11.5	
Terminal*	ST 5/16		
Cell(s)	Prismatic 4S1P		
Case Material	UL94-VO PBT/PC		
IP Rating	67		
Electrolyte	LiFeP04		

^{*}TERMINAL TORQUE: 13 Nm / 9.6 ft-lb

ELECTRICAL SPECIFICATIONS

Open Circuit Voltage (V)	12.8
Charge Voltage (Bulk Vdc)	13.8 - 14.2
Max Absorption Voltage (U1 Vdc)	13.8
Float Voltage (U2 Vdc)	13.6
BMS Max. Voltage protection (Vdc)	14.6 (Approximately)
Suggested Low Voltage Cutoff (Vdc) *	12
BMS Min. Voltage protection (Vdc)	10.0 (Approximately)
Max. Continuous Charge Current (I Max. Adc)	100
Min. Finishing Charge Current (I Min. Adc)	2%-3% C1 / Min. 200ma
Max Continuous Discharge Current (Adc)	100
Max. Peak Current (Adc)	250 A RMS (2 sec)
Self Discharge (25°C / 77°F)	< 3% per month
Charge Temperature	Min: 0°C (32°F) Max: 55°C (131°F)
Discharge Temperature	Min: -20°C (-4°F) Max: 60°C (140°F)
Storage Temperature	Min: -10°C (14°F) Max: 30°C (86°F)

Electrical Specifications at 25°C.

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

CAUTION: Do not exceed maximum voltage at the battery terminals (Bulk Vdc) *NOTE: 98% of battery capacity is delivered above 3Vpc (12V, 24V, 36V and 48V models)

PERFORMANCE SPECIFICATIONS

Nominal Energy (kWh)	1.28
Useable DoD	100%
Rated Wh Capacity (1C)	1280
Rated Ah Capacity (1C)	100

Minutes of Discharge					
@25A	@56A	@75A	@85A	@100A	
240	107	80	70	60	

FEATURES

BLUETOOTH APP

- State of Charge
- Voltage / Current
- Temperature °F/°C HIGH-CURRENT BMS

• Field replaceable fuse protection

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
- 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 than C/2 rated lithium batteries
- Opportunity charge at 1C rate anytime, regardless of SoC

SURGE POWER

- Surge power for inverter chargers
- Up to 3C peak power discharge rate
- Up to 1C continuous discharge rate

HIGH-EFFICIENCY

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

PARALLEL POWER

- Easy to parallel more capacity
- Linear scaling of charge, discharge and peak capacity

• Fast installation. No special tools

- Drop-in lead-acid replacement

RELIABLE AND SAFE

- LiFePO₄ is safe
- Maintenance-free
- UL94 V0 flame retardant case and cover
- IP 67 rated

CERTIFIED QUALITY

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

• UN 38.3

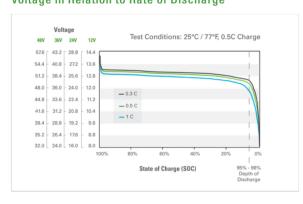
SHIPPING CLASSIFICATION

• UN 3480, Class 9 (Lithium batteries)

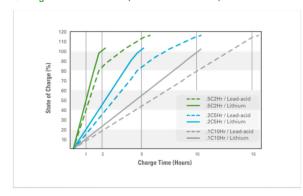
Fast Charging at .5C (2HR) to 1C (1HR)

Bulk Vdc I Max CURRENT Absorption & Balancing Rising Vottage = Rising Pressure inside the battery Rising Pressure inside pitternal Resistance and Flest Rising Internal Resistance = falling Current Terminate at 2% - 3% of battery rated capacity At .5C = 120 minutes plus 10% total charge time No time limit in balancing if desirable Set Float Maximum Time to 8 Hours For Balancing, 200 milliamps of Current are required.

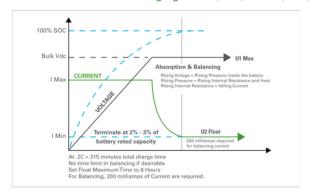
Voltage in Relation to Rate of Discharge



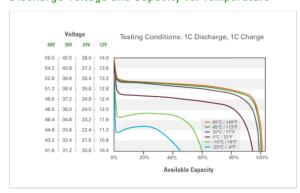
Charge Performance (Lithium vs. Lead)



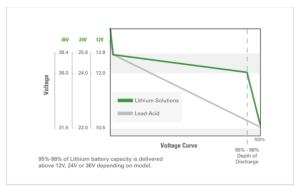
Standard to Low Rate Charging at .2C (5HR) to .5C (2HR)



Discharge Voltage and Capacity vs. Temperature



Discharge Performance (Lithium vs. Lead)



NOTES

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.

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