

LiFePO₄
Lithium Iron Phosphate
ECI1220

FEATURES:

- High energy density
- Automatic protection with internal battery management system
- Low self-discharge rate
- Long cycle life
- Excellent performance in all operating temperatures

BATTERY SPECIFICATIONS

Nominal Characteristics

Nominal Voltage /V	12.8V
Nominal Capacity /Ah (25°C , 0.2C)	≥ 20Ah

Mechanical Characteristics

Weight	4.75 lbs
Dimensions L×W×H	7.1 x 3 x 6.6 in
Terminal	F13 - M5

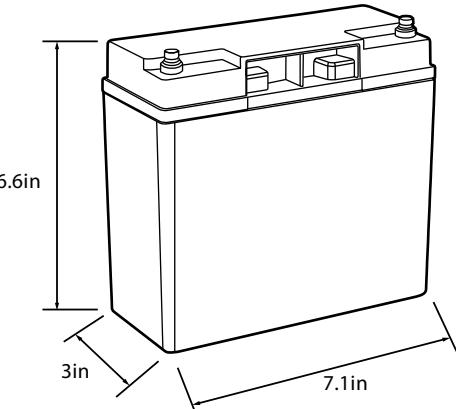
Electrical Characteristics

Voltage Window	9.2 – 14.6V
Charge Voltage	14.4V
Standby Voltage	13.8V
Max. Continue Discharge Current	20A
Max. Permanent Discharge Current	40A 10Sec.
Max. Continue Charge Current	10A

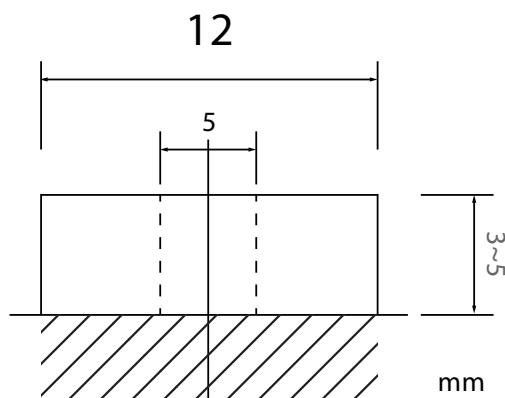
Operation Conditions

Cycle Life (+20°C 0.2C 100%DOD)	>2500 Cycles
Operating Temperature	Discharge: - 4 – 140 °F Charge: 32 – 140 °F
Storage Temperature	32 – 86 °F
Storage Duration	12 Months at 77 °F
Safety Standard	UI1642 at cell level

BATTERY DIMENSIONS:



TERMINAL DIMENSIONS:



BMS SPECIFICATIONS

Protection	Content	Criteria
Voltage	Charging voltage	DC:14.4V 3.6V/Cell
	Balance voltage for single cell	3.525±0.025V
Current	Balance current for single cell	36±10mA
	Current consumption	≤50uA
	Max continuous charge current	≤30A
	Max continuous discharge current	≤30A
	Maximum discharging current (time)	60A/5S
Over-Charge	Over-Charge detection voltage	3.65±0.025V
	Over-Charge detection delay time	0.5~1.5S
	Over-Charge release voltage	3.55±0.05V
Over-Discharge	Over-Discharge detection voltage	2.30±0.05V
	Over-Discharge detection delay time	500~1500mS
	Over-Discharge release voltage	2.7±0.10V
Over-Current	Over-Discharge current detection	100±15A
	Detection delay time 1	50~150mS
	Over-Discharge current detection	200±30A
	Detection delay time 2	5~15mS
	Over-Charge current detection current	40±9A
	Detection delay time	300~800mS
Short Circuit	Short Circuit Protection Current	400A
	Detection delay time	450~800uS
	Detection condition	Exterior short circuit 10AH/10°C & 25°C
	Release condition	Cut load, Auto Recovery
Temperature	Detect the temperature of the Mosfet MOS	/
	Charging high temperature protection	50±5 °C
	Charging high temperature release	40~45 °C
	Charging low temperature protection	0±5 °C
	Charging low temperature release	5~10 °C
	Discharge high temperature protection	70±5 °C
	Discharge high temperature release	50~60 °C
	Discharge low temperature protection	-20±5 °C
	Discharge low temperature release	-10~15 °C
	Temperature protection release condition	25 °C Idle for 60 minutes, charging activation.
	Operating temperature range	-20~+70 °C
	Storage temperature range	0~60 °C