



# LP Series-General Purpose LP12-2.2(12V2.2Ah)

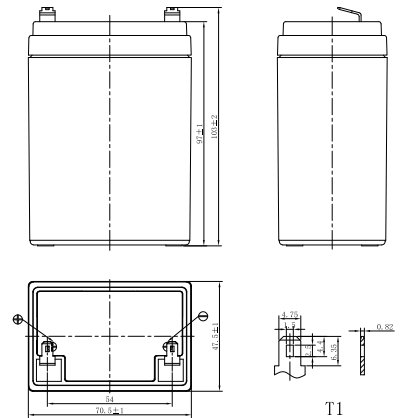


## Specifications

Rated Voltage	12V	
Nominal Capacity	2.2Ah	(C <sub>20</sub> , 1.75V/cell)
Dimension	Length	70.5±1mm (2.78 inches)
	Width	47.5±1mm (1.87 inches)
	Container Height	97±1mm (3.82 inches)
	Total Height	103±2mm (4.05 inches)
Approx Weight	0.78 Kg (1.72 lbs)	
Terminal	T1	
Container Material	ABS	
Rated Capacity (25°C)	2.20 Ah	(20hr, 0.110A, 1.75V/cell)
	2.05 Ah	(10hr, 0.205A, 1.75V/cell)
	1.85 Ah	(5hr, 0.370A, 1.75V/cell)
	1.61 Ah	(3hr, 0.538A, 1.75V/cell)
	1.34 Ah	(1hr, 1.34A, 1.60V/cell)
Max. Discharge Current	33A (5s)	
Internal Resistance (25°C)	Approx 95mΩ	
Operating Temp. Range	Discharge	-15 ~ 50°C (5 ~ 122°F)
	Charge	-20 ~ 40°C (-4 ~ 104°F)
	Storage	-15 ~ 40°C (5 ~ 104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 0.66A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
	Initial Charging Current less than 0.66A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Standby Use	Initial Charging Current less than 0.66A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	LP series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



## Layout



## Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	6.20	4.00	3.12	2.61	1.98	1.49	1.21	0.871	0.683	0.521	0.429	0.360	0.311	0.247	0.200	0.108
1.80V/cell	6.67	4.24	3.27	2.72	2.05	1.53	1.24	0.889	0.696	0.530	0.435	0.365	0.316	0.250	0.203	0.109
1.75V/cell	7.03	4.41	3.38	2.79	2.10	1.56	1.27	0.906	0.708	0.538	0.441	0.370	0.320	0.253	0.205	0.110
1.70V/cell	7.36	4.58	3.49	2.87	2.15	1.59	1.29	0.921	0.719	0.546	0.447	0.375	0.324	0.256	0.207	0.111
1.67V/cell	7.62	4.71	3.58	2.93	2.19	1.62	1.31	0.933	0.727	0.551	0.451	0.378	0.327	0.258	0.209	0.112
1.60V/cell	8.08	4.91	3.70	3.02	2.25	1.66	1.34	0.953	0.742	0.561	0.459	0.384	0.331	0.261	0.211	0.113

## Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	11.7	7.60	5.97	5.03	3.84	2.88	2.36	1.70	1.34	1.02	0.845	0.711	0.616	0.489	0.398	0.215
1.80V/cell	12.5	8.00	6.22	5.21	3.94	2.95	2.41	1.73	1.36	1.04	0.856	0.720	0.625	0.496	0.403	0.218
1.75V/cell	13.0	8.27	6.39	5.32	4.02	3.00	2.45	1.76	1.38	1.05	0.866	0.729	0.631	0.501	0.407	0.220
1.70V/cell	13.5	8.54	6.56	5.45	4.11	3.06	2.49	1.78	1.40	1.07	0.876	0.737	0.638	0.505	0.411	0.222
1.67V/cell	13.9	8.73	6.71	5.55	4.17	3.10	2.52	1.80	1.41	1.08	0.884	0.743	0.643	0.509	0.413	0.224
1.60V/cell	14.4	8.99	6.89	5.68	4.26	3.16	2.56	1.83	1.43	1.09	0.897	0.753	0.651	0.516	0.418	0.226



# LP Series-General Purpose LP12-2.2(12V2.2Ah)



## Applications

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Auto control system

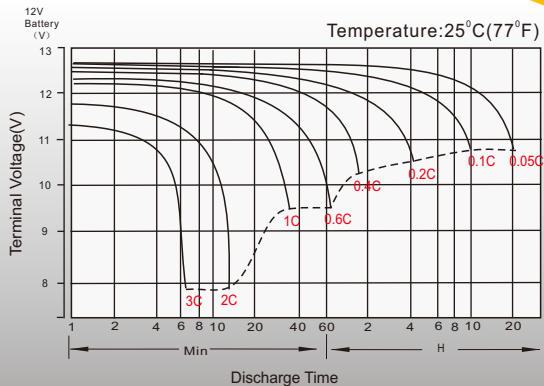
## General Features

- 5 years design life(25°C)
- Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- High quality AGM separator: extend cycle life and prevent micro short circuit
- High purity raw material: ensure low self discharge rate

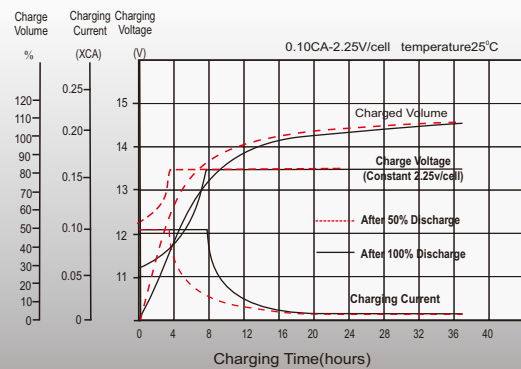
## Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in Leoch®IATF 16949, ISO45001, ISO 9001 and ISO 14001 certified production facilities

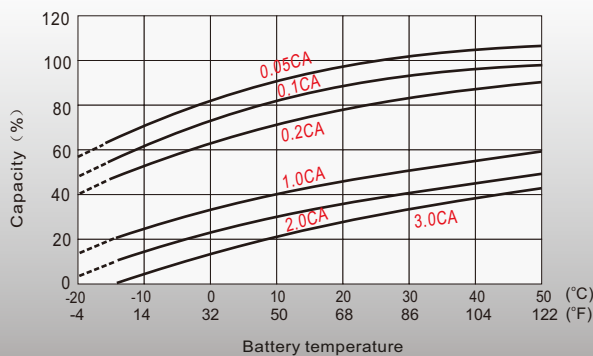
## Discharge Characteristics



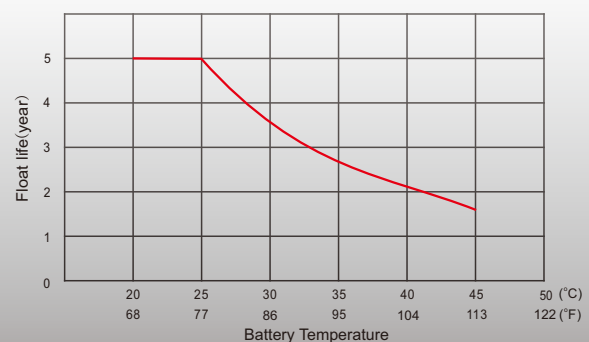
## Float Charging Characteristics



## Temperature Effects in Relation to Battery Capacity



## Effect of Temperature on Long Term Float Life



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Publication No.: LB-LP12-2.2-PD-EN-V2.1-202010