



# LP Series-General Purpose LP12-2.8(12V2.8Ah)

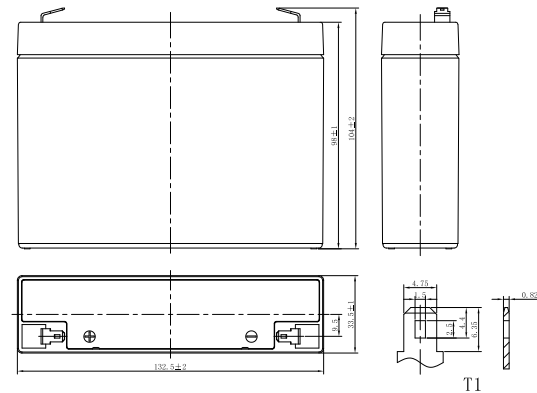


## Specifications

Rated Voltage	12V	
Nominal Capacity	2.8Ah	(C <sub>20</sub> , 1.75V/cell)
Dimension	Length	132.5±2mm (5.22 inches)
	Width	33.5±1mm (1.32 inches)
	Container Height	98±1mm (3.86 inches)
	Total Height	104±2mm (4.09 inches)
Approx Weight	1.10 Kg (2.43 lbs)	
Terminal	T1	
Container Material	ABS	
Rated Capacity (25°C)	2.80 Ah	(20hr, 0.140A, 1.75V/cell)
	2.65 Ah	(10hr, 0.265A, 1.75V/cell)
	2.41 Ah	(5hr, 0.482A, 1.75V/cell)
	2.16 Ah	(3hr, 0.719A, 1.75V/cell)
	1.89 Ah	(1hr, 1.89A, 1.60V/cell)
Max. Discharge Current	42A (5s)	
Internal Resistance (25°C)	Approx 44mΩ	
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 0.84A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	Initial Charging Current less than 0.84A. 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	9.02	6.18	4.81	3.91	2.88	2.11	1.71	1.25	0.972	0.697	0.551	0.469	0.402	0.316	0.259	0.137
1.80V/cell	9.70	6.55	5.05	4.07	2.97	2.16	1.75	1.27	0.990	0.708	0.559	0.476	0.408	0.321	0.262	0.138
1.75V/cell	10.2	6.82	5.22	4.18	3.05	2.21	1.79	1.30	1.01	0.719	0.567	0.482	0.413	0.325	0.265	0.140
1.70V/cell	10.7	7.09	5.39	4.30	3.12	2.26	1.82	1.32	1.02	0.730	0.575	0.489	0.418	0.328	0.268	0.141
1.67V/cell	11.1	7.29	5.52	4.39	3.18	2.29	1.85	1.33	1.03	0.737	0.580	0.493	0.421	0.331	0.269	0.142
1.60V/cell	11.7	7.60	5.71	4.52	3.27	2.35	1.89	1.36	1.06	0.751	0.590	0.501	0.427	0.335	0.273	0.144

## 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	17.1	11.8	9.21	7.54	5.57	4.08	3.33	2.43	1.90	1.37	1.09	0.926	0.795	0.627	0.514	0.274
1.80V/cell	18.2	12.4	9.61	7.80	5.72	4.18	3.40	2.48	1.93	1.39	1.10	0.938	0.806	0.636	0.521	0.277
1.75V/cell	18.9	12.8	9.87	7.97	5.84	4.25	3.46	2.51	1.96	1.41	1.11	0.949	0.814	0.642	0.525	0.280
1.70V/cell	19.6	13.2	10.1	8.16	5.96	4.33	3.51	2.55	1.99	1.43	1.13	0.961	0.823	0.648	0.531	0.282
1.67V/cell	20.1	13.5	10.4	8.31	6.05	4.39	3.56	2.58	2.01	1.44	1.14	0.968	0.830	0.653	0.534	0.284
1.60V/cell	21.0	13.9	10.6	8.51	6.18	4.47	3.62	2.62	2.04	1.46	1.15	0.981	0.840	0.662	0.540	0.288



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## 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

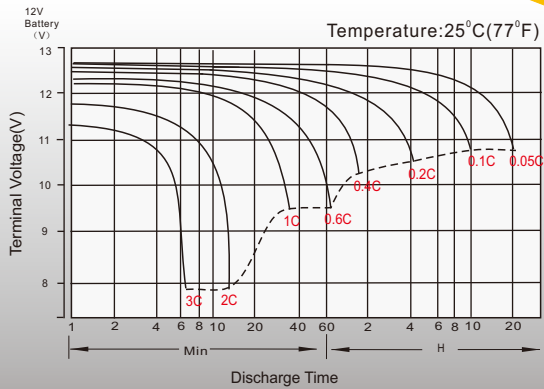
## General Features

- 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

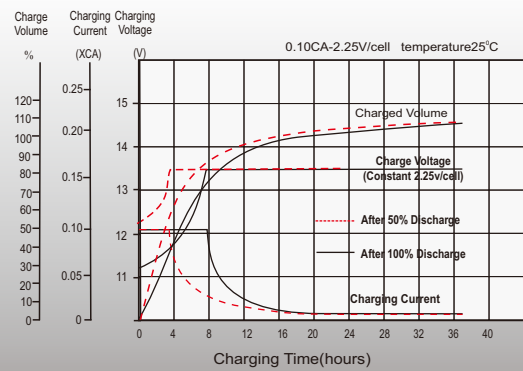
## Standards

- 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

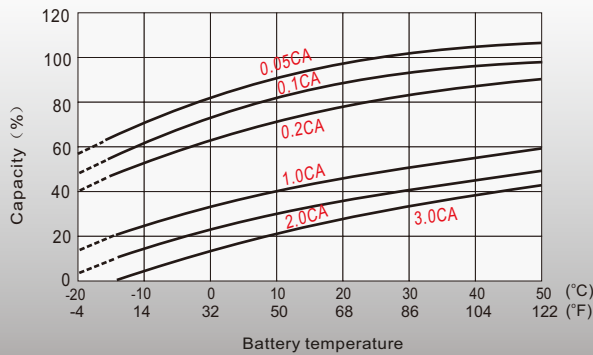
## Discharge Characteristics



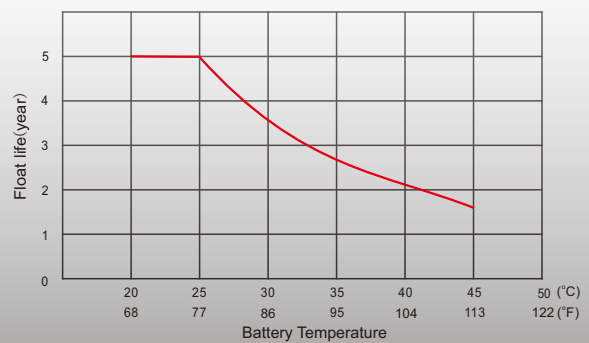
## Float Charging Characteristics



## Temperature Effects in Relation to Battery Capacity



## Float Service Life



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