

# LP SERIES-General Purpose

## LP12-2.3 (12V2.3AH)



### Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	2.3AH	
Dimension	Length	178±1mm (7.00 inches)
	Width	35±1mm (1.38 inches)
	Container Height	60±1mm (2.36 inches)
	Total Height (with Terminal)	66±1mm (2.60 inches)
Approx Weight	Approx 1.0 kg (2.21lbs)	
Terminal	T1	
Container Material	ABS	
Rated Capacity	2.30 AH/0.115A	(20hr, 1.80V/cell, 25°C/77°F)
	2.14AH/0.214A	(10hr, 1.80V/cell, 25°C/77°F)
	1.95 AH/0.39A	(5hr, 1.75V/cell, 25°C/77°F)
	1.77 AH/0.59A	(3hr, 1.75V/cell, 25°C/77°F)
	1.44 AH/1.44A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	34.5A (5s)	
Internal Resistance	Approx 90mΩ	
Operating Temp. Range	Discharge	-15~50°C (5~120°F)
	Charge	0~40°C (5~104°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 0.69A. Voltage	
	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	Leoch 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.	

### Applications

- ◆ All purpose
- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto control system



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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	4.38	3.36	2.79	2.41	1.86	1.37	1.16	0.68	0.54	0.44	0.355	0.308	0.248	0.207	0.114
1.80V/cell	5.88	4.30	3.37	2.85	2.20	1.60	1.30	0.75	0.58	0.46	0.381	0.330	0.263	0.214	0.115
1.75V/cell	6.63	4.72	3.68	3.06	2.28	1.66	1.36	0.77	0.59	0.47	0.391	0.339	0.268	0.220	0.116
1.70V/cell	7.30	5.15	3.93	3.22	2.37	1.72	1.40	0.79	0.60	0.49	0.401	0.346	0.272	0.224	0.118
1.65V/cell	8.05	5.55	4.17	3.42	2.51	1.77	1.43	0.81	0.63	0.50	0.412	0.354	0.276	0.229	0.120
1.60V/cell	8.88	6.03	4.46	3.64	2.65	1.84	1.44	0.84	0.65	0.52	0.426	0.362	0.279	0.231	0.121

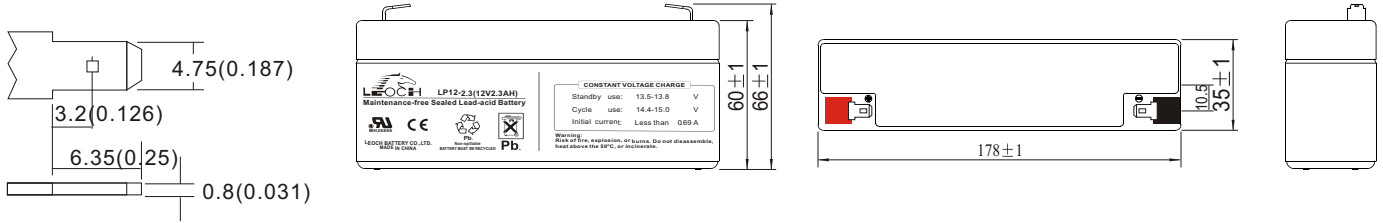
### Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	8.01	6.21	5.20	4.54	3.55	2.64	2.23	1.33	1.04	0.85	0.696	0.605	0.490	0.411	0.226
1.80V/cell	10.6	7.85	6.20	5.29	4.12	3.04	2.49	1.44	1.12	0.90	0.743	0.647	0.518	0.423	0.227
1.75V/cell	11.7	8.48	6.69	5.64	4.25	3.13	2.59	1.49	1.13	0.92	0.760	0.662	0.526	0.433	0.229
1.70V/cell	12.6	9.04	7.04	5.88	4.40	3.24	2.66	1.52	1.16	0.94	0.778	0.675	0.533	0.442	0.233
1.65V/cell	13.7	9.66	7.43	6.20	4.60	3.29	2.70	1.53	1.21	0.97	0.797	0.688	0.540	0.450	0.236
1.60V/cell	14.7	10.25	7.81	6.53	4.82	3.41	2.72	1.59	1.24	1.00	0.820	0.700	0.544	0.454	0.237

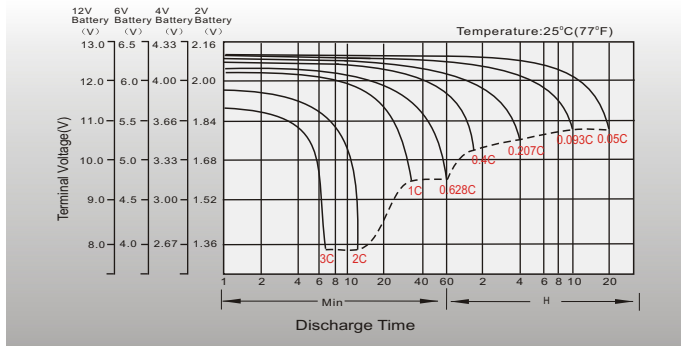
# Dimensions

## T1 Terminal

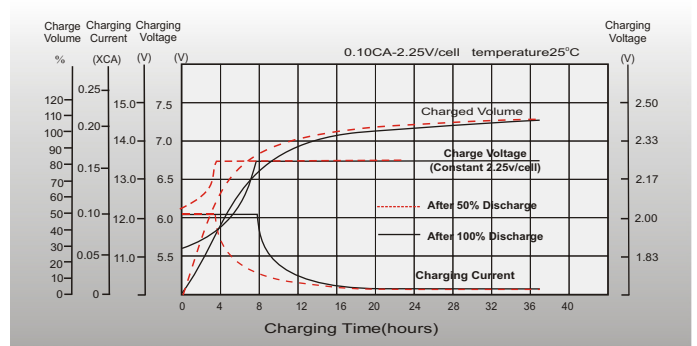
Unit: mm [inches]



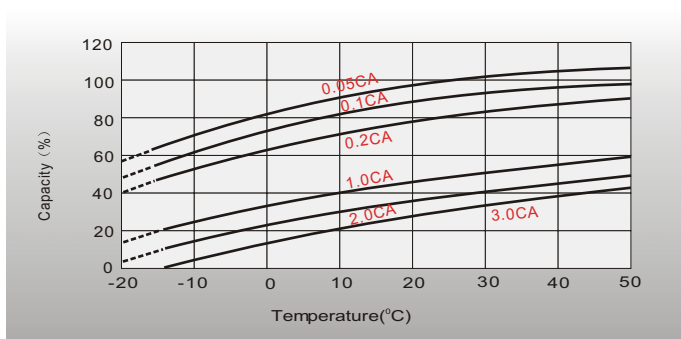
## Discharge Characteristics



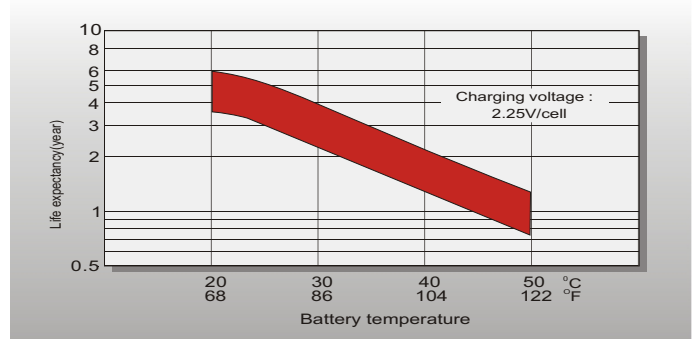
## Float Charging Characteristics



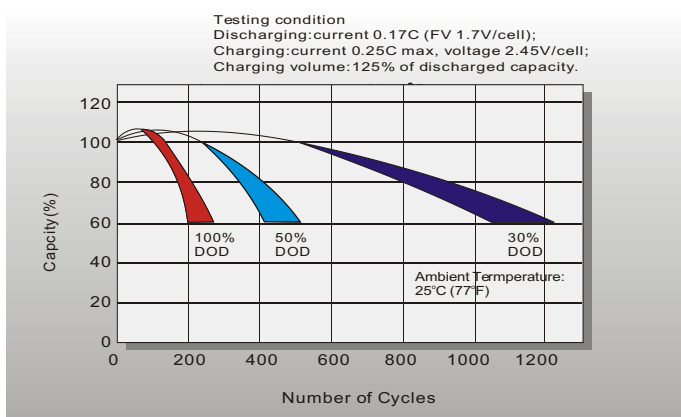
## Temperature Effects in Relation to Batter Capacity



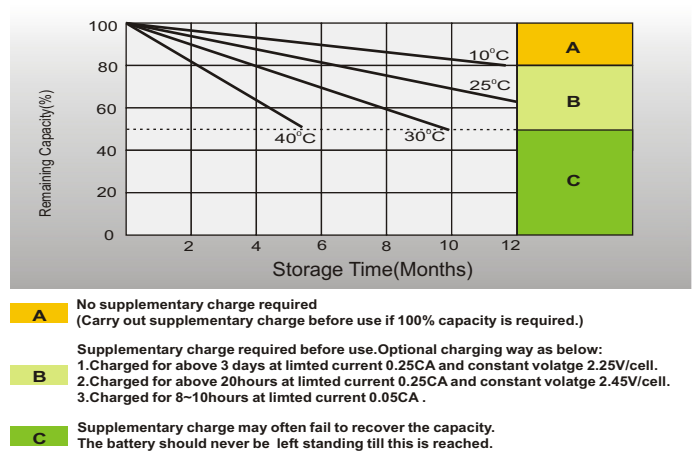
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## Self Discharge Characteristics



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