

# LP SERIES-General Purpose

## LP6-7.8 (6V7.8AH)

### Specification

Nominal Voltage	6V	
Nominal Capacity(20HR)	7.8AH	
Dimension	Length	151 ± 1mm (5.95 inches)
	Width	34 ± 1mm (1.34 inches)
	Container Height	94 ± 1mm (3.70 inches)
	Total Height (with Terminal)	100 ± 1mm (3.94 inches)
Approx Weight	Approx 1.28 kg (2.82lbs)	
Terminal	T1 / T2	
Container Material	ABS	
Rated Capacity	7.80 AH/0.39A	(20hr, 1.80V/cell, 25°C/77°F)
	7.25 AH/0.72A	(10hr, 1.80V/cell, 25°C/77°F)
	6.63 AH/1.33A	(5hr, 1.75V/cell, 25°C/77°F)
	5.96 AH/1.99A	(3hr, 1.75V/cell, 25°C/77°F)
	4.90 AH/4.90A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	117A (5s)	
Internal Resistance	Approx 12mΩ	
Operating Temp. Range	Discharge	-15~50°C (5~122°F)
	Charge	0~40°C (32~104°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 2.34A. Voltage	
	7.2V~7.5V at 25°C (77°F) Temp. Coefficient -15mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	6.75V~6.9V at 25°C (77°F) Temp. Coefficient -10mV/°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	14.9	11.4	9.45	8.17	6.32	4.65	3.92	2.32	1.82	1.48	1.20	1.04	0.842	0.704	0.386
1.80V/cell	19.9	14.6	11.4	9.7	7.45	5.41	4.39	2.53	1.95	1.58	1.29	1.12	0.893	0.725	0.390
1.75V/cell	22.5	16.0	12.5	10.4	7.74	5.62	4.60	2.63	1.99	1.61	1.33	1.15	0.909	0.745	0.394
1.70V/cell	24.8	17.5	13.3	10.9	8.05	5.84	4.74	2.69	2.04	1.65	1.36	1.17	0.921	0.760	0.401
1.65V/cell	27.3	18.8	14.2	11.6	8.50	5.99	4.85	2.73	2.13	1.71	1.40	1.20	0.936	0.775	0.406
1.60V/cell	30.1	20.5	15.1	12.4	8.97	6.24	4.90	2.85	2.20	1.76	1.44	1.23	0.945	0.784	0.409

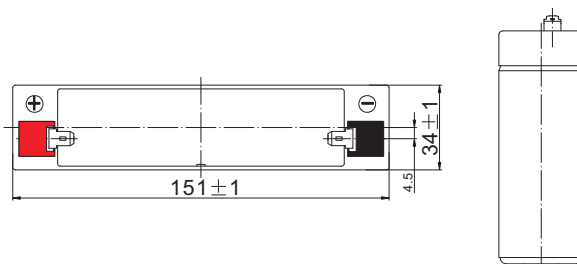
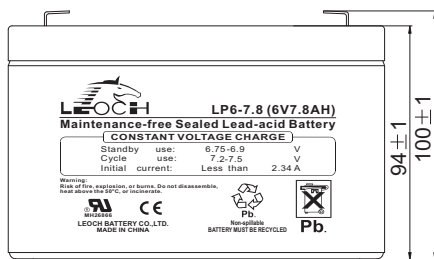
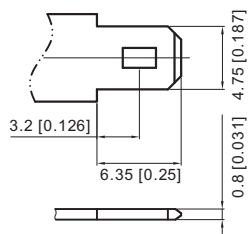
### Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	27.16	21.07	17.63	15.40	12.04	8.94	7.57	4.50	3.54	2.89	2.36	2.05	1.66	1.39	0.765
1.80V/cell	36.07	26.61	21.02	17.94	13.99	10.32	8.43	4.88	3.79	3.06	2.52	2.19	1.76	1.43	0.771
1.75V/cell	39.80	28.77	22.67	19.11	14.40	10.61	8.78	5.05	3.84	3.12	2.58	2.25	1.78	1.47	0.778
1.70V/cell	42.61	30.64	23.87	19.93	14.91	10.99	9.03	5.16	3.94	3.20	2.64	2.29	1.81	1.50	0.792
1.65V/cell	46.32	32.77	25.19	21.02	15.60	11.17	9.17	5.21	4.09	3.30	2.70	2.33	1.83	1.53	0.801
1.60V/cell	49.91	34.76	26.49	22.14	16.35	11.58	9.21	5.40	4.20	3.39	2.78	2.38	1.85	1.54	0.805

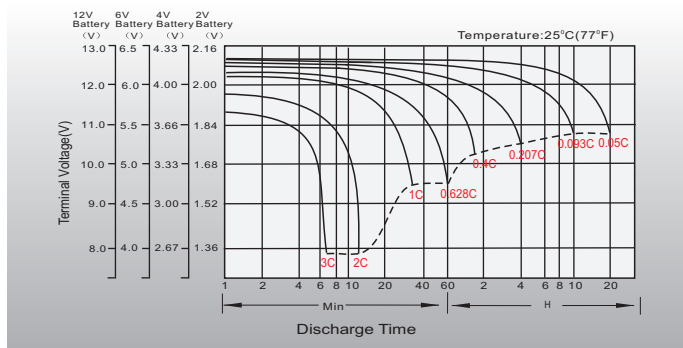
## Dimensions

### T1 Terminal

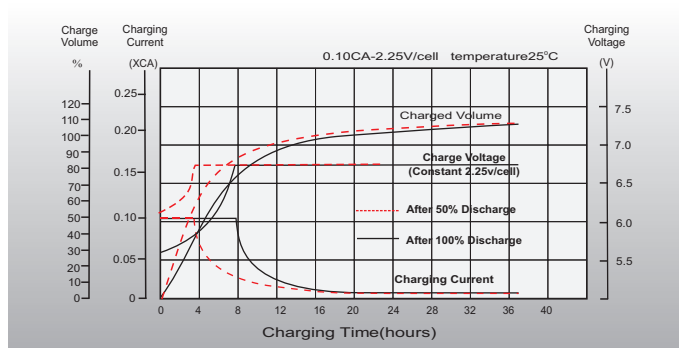
Unit: mm [inches]



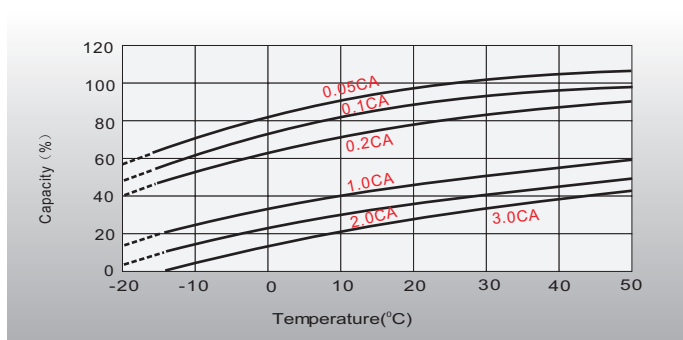
## Discharge Characteristics



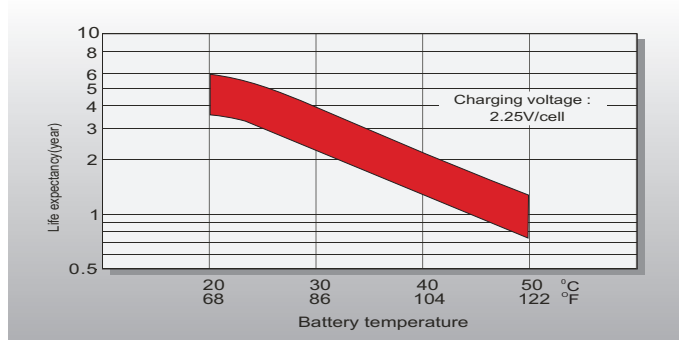
## Float Charging Characteristics



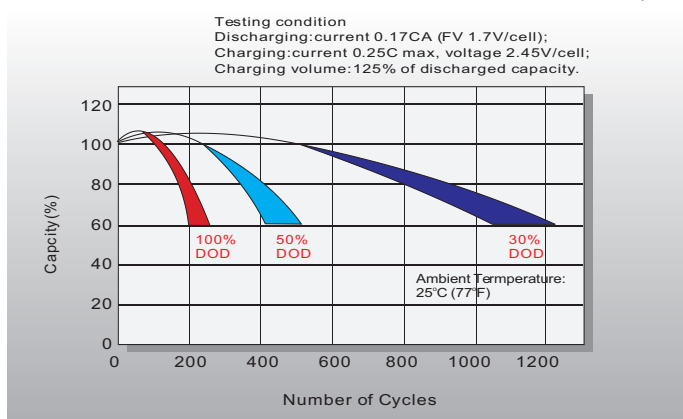
## Temperature Effects in Relation to Battery Capacity



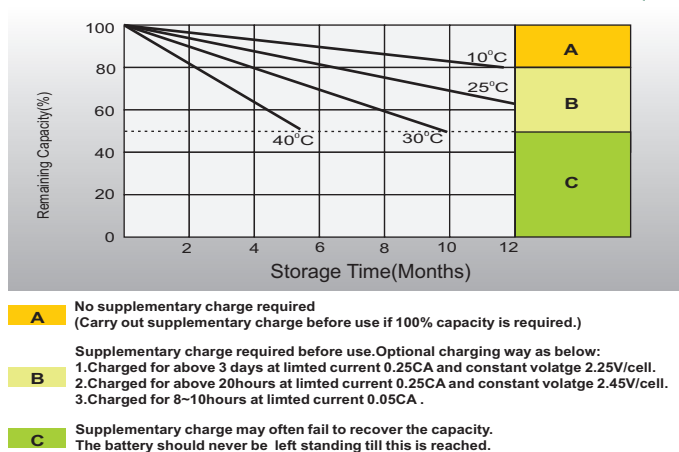
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## Self Discharge Characteristics



- A** No supplementary charge required (Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:  
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.  
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.  
3. Charged for 8-10 hours at limited current 0.05CA.
- C** Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.

## Sales Office

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