

**CHROMEBATTERY™**

# LP SERIES-General Purpose

## LP12-9 (12V9AH)



### Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	9AH	
Dimensions	Length	151;2mm (5.95 inches)
	Width	65;1mm (2.56 inches)
	Container Height	94;1mm (3.70 inches)
	Total Height (with Terminal)	99.5;1mm (3.92 inches)
	Approx Weight	Approx 2.75 kg (6.06lbs)
Terminal	T1 /T2	
Container Material	ABS	
Rated Capacity	9.00 AH/0.450A	(20hr , 1.80V/cell, 25°C/77°F)
	8.31 AH/0.831A	(10hr, 1.80V/cell, 25°C/77°F)
	7.55 AH/1.51A	(5hr, 1.75V/cell, 25°C/77°F)
	6.84 AH/2.28A	(3hr, 1.75V/cell, 25°C/77°F)
	6.24 AH/6.24A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	135A (5s)	
Internal Resistance	Approx 17mΩ	
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 2.70A. 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	Chrome Battery 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 (77F) °

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	30.8	21.5	16.1	13.1	10.1	7.24	5.65	3.12	2.19	1.72	1.44	1.25	0.98	0.812	0.446
1.80V/cell	34.3	23.2	17.1	13.9	10.5	7.42	5.80	3.18	2.23	1.76	1.47	1.28	1.00	0.831	0.450
1.75V/cell	37.9	24.8	18.0	14.5	10.8	7.61	5.93	3.24	2.28	1.80	1.51	1.30	1.03	0.843	0.455
1.70V/cell	41.7	26.3	18.6	15.0	11.1	7.77	6.02	3.30	2.32	1.83	1.54	1.33	1.05	0.858	0.463
1.65V/cell	43.9	27.4	19.4	15.6	11.3	7.95	6.13	3.35	2.36	1.87	1.57	1.36	1.06	0.874	0.469
1.60V/cell	47.0	28.5	20.2	16.3	11.7	8.08	6.24	3.40	2.40	1.91	1.60	1.39	1.08	0.887	0.472

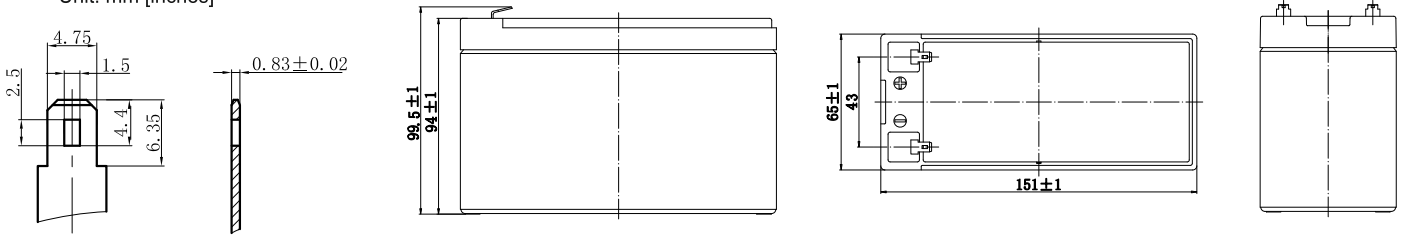
### Constant Power Discharge (Watts) at 25 C (77F) °

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	57.5	40.3	30.2	24.7	19.2	13.9	10.9	6.05	4.27	3.36	2.83	2.45	1.93	1.61	0.883
1.80V/cell	62.0	42.6	31.6	26.0	19.8	14.1	11.1	6.13	4.32	3.42	2.87	2.50	1.98	1.64	0.890
1.75V/cell	67.8	45.0	33.0	26.9	20.2	14.4	11.3	6.22	4.39	3.49	2.93	2.54	2.01	1.66	0.898
1.70V/cell	73.6	47.1	33.7	27.7	20.7	14.6	11.5	6.32	4.47	3.55	2.98	2.59	2.05	1.69	0.913
1.65V/cell	76.4	48.3	34.8	28.5	21.0	14.9	11.6	6.40	4.54	3.59	3.04	2.64	2.08	1.72	0.925
1.60V/cell	80.3	49.6	35.6	29.2	21.3	15.0	11.7	6.46	4.59	3.66	3.09	2.69	2.11	1.74	0.929

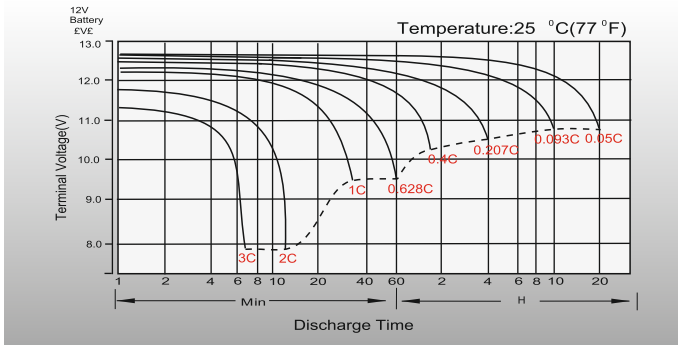
# Dimensions

## T1 Terminal

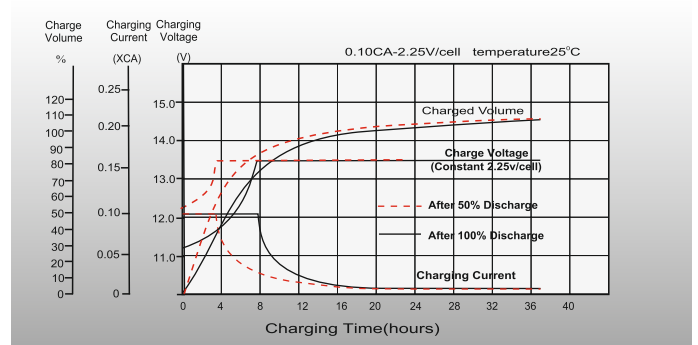
Unit: mm [inches]



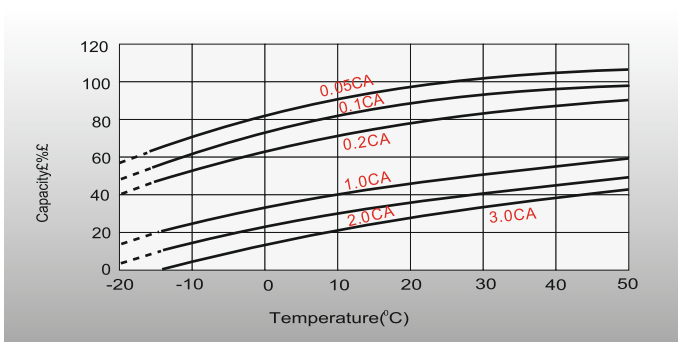
## Discharge Characteristics



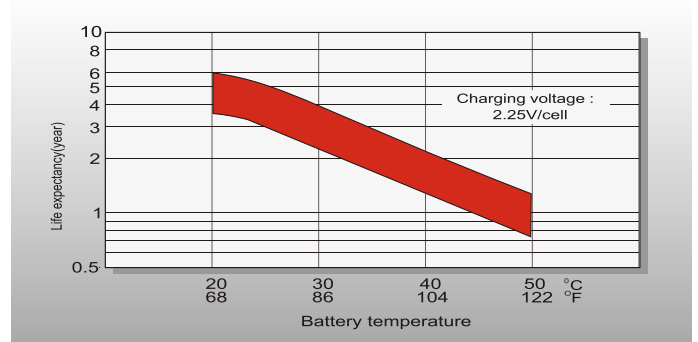
## Float Charging Characteristics



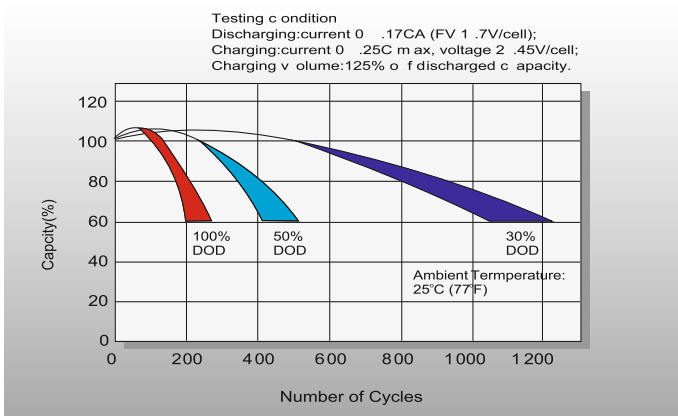
## Temperature Effects in Relation to Battery Capacity



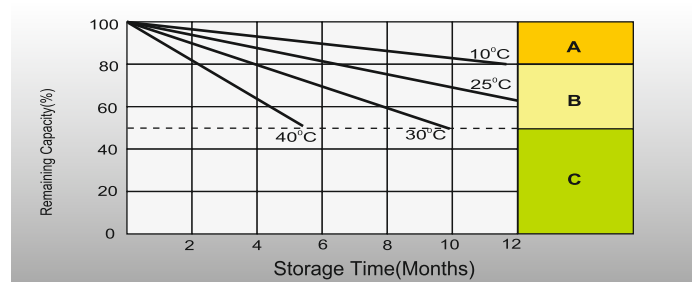
## Effect of Temperature on Long Term Float Life



## 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.