

# LP SERIES-General Purpose

## LP12-7.8 (12V7.8AH)

### Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	7.8AH	
Dimensions	Length	151±2mm (5.95 inches)
	Width	65±1mm (2.56 inches)
	Container Height	93.5±1mm (3.68 inches)
	Total Height (with Terminal)	99±1mm (3.90 inches)
	Approx Weight	Approx 2.5 kg (5.51lbs)
Terminal	T1 / T2	
Container Material	ABS	
Rated Capacity	7.80 AH/0.390A	(20hr, 1.80V/cell, 25°C/77°F)
	7.28 AH/0.728A	(10hr, 1.80V/cell, 25°C/77°F)
	6.50 AH/1.30A	(5hr, 1.75V/cell, 25°C/77°F)
	5.7 AH/1.90A	(3hr, 1.75V/cell, 25°C/77°F)
	4.74 AH/4.74A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	117A (5s)	
Internal Resistance	Approx 18mΩ	
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	
	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	17.9	13.0	11.1	9.4	6.88	5.03	4.01	2.38	1.78	1.44	1.22	1.06	0.842	0.697	0.383
1.80V/cell	21.4	15.2	12.5	10.2	7.4	5.35	4.27	2.50	1.85	1.51	1.27	1.10	0.873	0.728	0.390
1.75V/cell	24.0	16.6	13.4	10.8	7.7	5.56	4.43	2.57	1.90	1.54	1.30	1.12	0.886	0.739	0.398
1.70V/cell	26.1	17.7	14.2	11.3	8.0	5.71	4.52	2.63	1.94	1.57	1.32	1.14	0.905	0.749	0.403
1.65V/cell	28.4	18.8	14.9	11.8	8.3	5.89	4.64	2.68	1.98	1.60	1.34	1.16	0.917	0.757	0.406
1.60V/cell	29.9	19.7	15.4	12.1	8.5	6.04	4.74	2.74	2.02	1.63	1.37	1.18	0.932	0.768	0.413

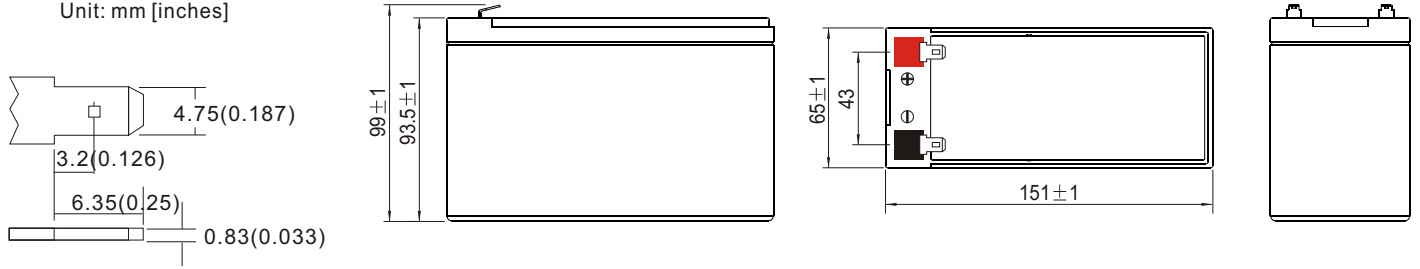
### Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	33.7	24.8	21.4	18.3	13.4	9.9	7.90	4.71	3.54	2.88	2.45	2.12	1.69	1.41	0.773
1.80V/cell	40.1	28.8	24.0	19.8	14.4	10.4	8.38	4.93	3.67	3.00	2.53	2.20	1.75	1.46	0.785
1.75V/cell	44.4	31.2	25.4	20.7	14.9	10.8	8.68	5.07	3.75	3.05	2.58	2.23	1.77	1.48	0.797
1.70V/cell	47.7	32.9	26.7	21.5	15.3	11.0	8.78	5.14	3.81	3.09	2.61	2.26	1.79	1.49	0.800
1.65V/cell	50.9	34.2	27.6	22.1	15.7	11.3	8.93	5.18	3.84	3.12	2.63	2.28	1.80	1.49	0.802
1.60V/cell	52.4	35.1	28.0	22.4	15.9	11.4	9.06	5.27	3.90	3.16	2.66	2.30	1.82	1.50	0.812

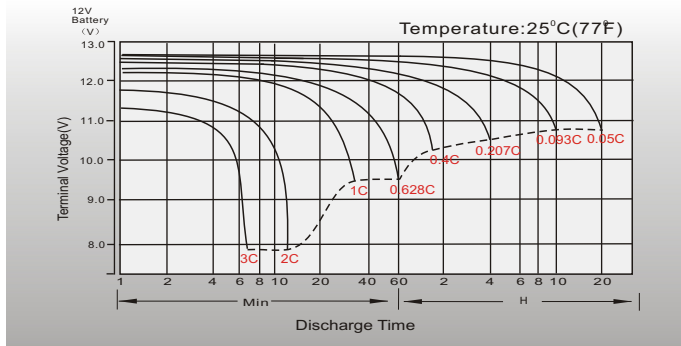
# Dimensions

## T1 Terminal

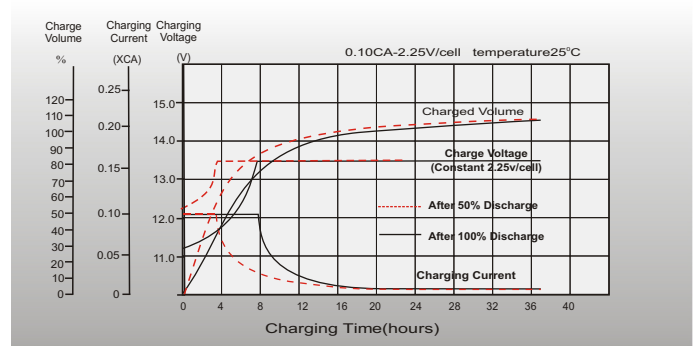
Unit: mm [inches]



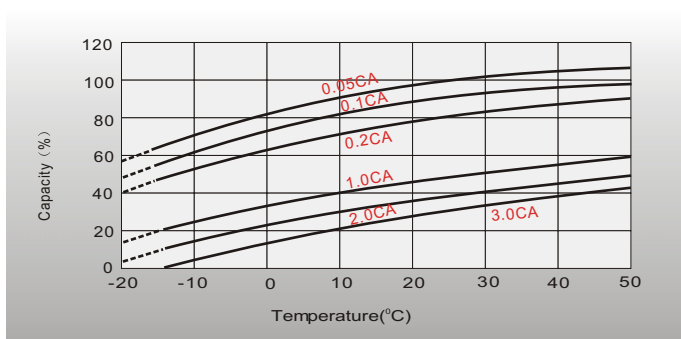
## Discharge Characteristics



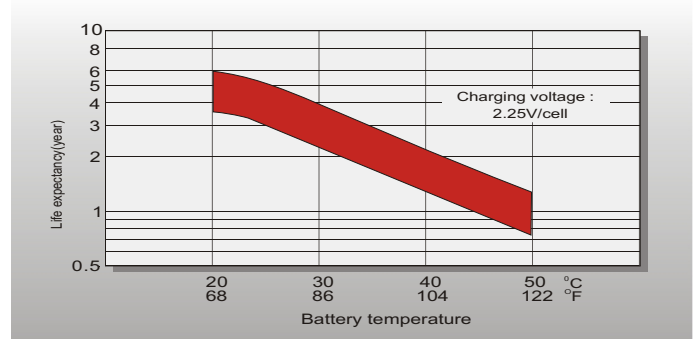
## Float Charging Characteristics



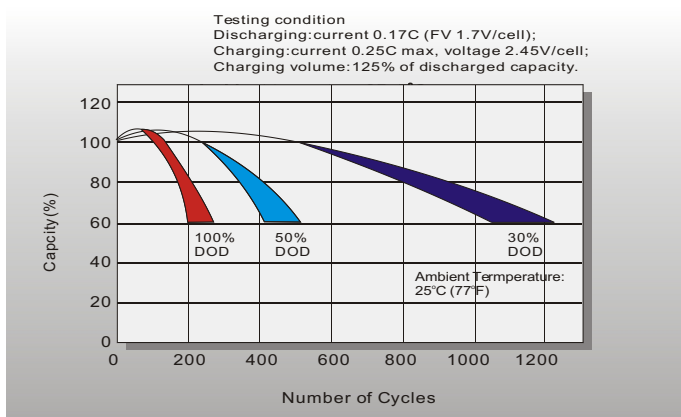
## Temperature Effects in Relation to Battery Capacity



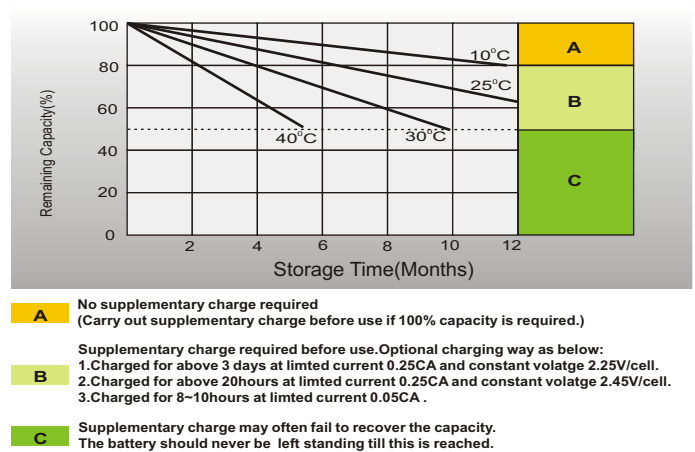
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## Self Discharge Characteristics



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