

# LP SERIES-General Purpose

## LP2-4.0 (2V4.0AH)

### Specification

Nominal Voltage	2V	
Nominal Capacity(20HR)	4.0AH	
Dimension	Length	48 ± 1mm (1.89 inches)
	Width	25 ± 1mm (0.98 inches)
	Container Height	101 ± 1mm (3.98 inches)
	Total Height (with Terminal)	107 ± 1mm (4.21 inches)
Approx Weight	Approx 0.28 kg (0.62lbs)	
Terminal	T1	
Container Material	ABS	
Rated Capacity	4.00 AH/0.20A	(20hr, 1.80V/cell, 25°C/77°F)
	3.72 AH/0.372A	(10hr, 1.80V/cell, 25°C/77°F)
	3.40 AH/0.68A	(5hr, 1.75V/cell, 25°C/77°F)
	3.06 AH/1.02A	(3hr, 1.75V/cell, 25°C/77°F)
	2.51 AH/2.51A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	60A (5s)	
Internal Resistance	Approx 10mΩ	
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 1.2A. Voltage	
	2.4V ~ 2.5V at 25°C (77°F) Temp. Coefficient -5mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	2.25V ~ 2.3V at 25°C (77°F) Temp. Coefficient -3mV/°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	7.62	5.85	4.85	4.19	3.24	2.39	2.01	1.19	0.93	0.76	0.62	0.54	0.432	0.361	0.198
1.80V/cell	10.2	7.47	5.85	4.95	3.82	2.78	2.25	1.30	1.00	0.81	0.66	0.57	0.458	0.372	0.200
1.75V/cell	11.5	8.21	6.39	5.33	3.97	2.88	2.36	1.35	1.02	0.83	0.68	0.59	0.466	0.382	0.202
1.70V/cell	12.7	8.95	6.83	5.6	4.13	3.00	2.43	1.38	1.05	0.85	0.70	0.60	0.473	0.39	0.206
1.65V/cell	14.0	9.66	7.26	5.95	4.36	3.07	2.49	1.40	1.09	0.88	0.72	0.62	0.480	0.398	0.208
1.60V/cell	15.4	10.5	7.76	6.34	4.60	3.20	2.51	1.46	1.13	0.90	0.74	0.63	0.485	0.402	0.210

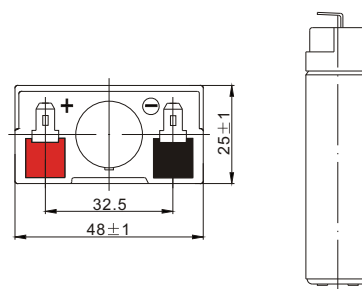
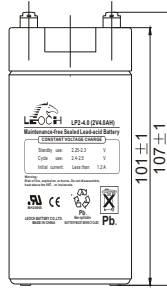
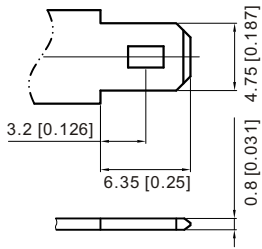
### Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	13.9	10.8	9.04	7.90	6.17	4.59	3.88	2.31	1.81	1.48	1.21	1.05	0.853	0.714	0.392
1.80V/cell	18.5	13.6	10.8	9.20	7.17	5.29	4.32	2.50	1.94	1.57	1.29	1.12	0.902	0.735	0.396
1.75V/cell	20.4	14.8	11.6	9.80	7.39	5.44	4.50	2.59	1.97	1.60	1.32	1.15	0.915	0.754	0.399
1.70V/cell	21.9	15.7	12.2	10.2	7.65	5.64	4.63	2.65	2.02	1.64	1.35	1.17	0.927	0.768	0.406
1.65V/cell	23.8	16.8	12.9	10.8	8.00	5.73	4.70	2.67	2.10	1.69	1.39	1.20	0.939	0.783	0.411
1.60V/cell	25.6	17.8	13.6	11.4	8.39	5.94	4.72	2.77	2.15	1.74	1.43	1.22	0.947	0.790	0.413

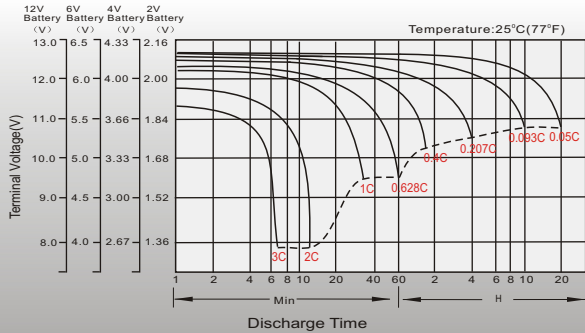
# Dimensions

## T1 Terminal

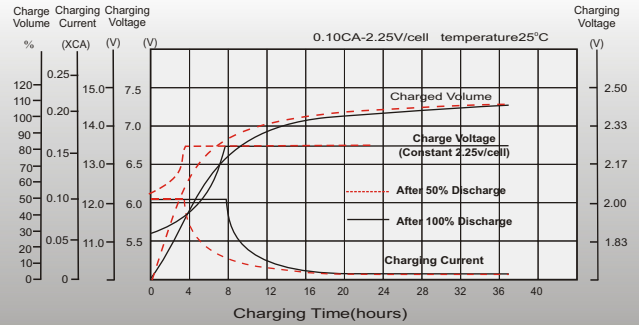
Unit: mm [inches]



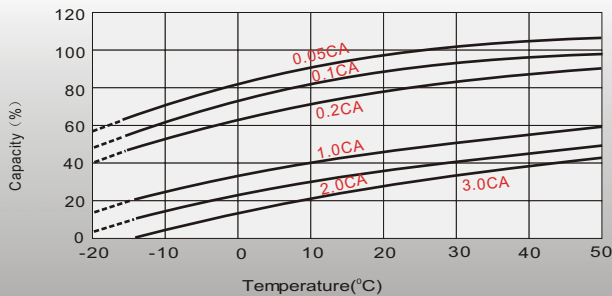
## Discharge Characteristics



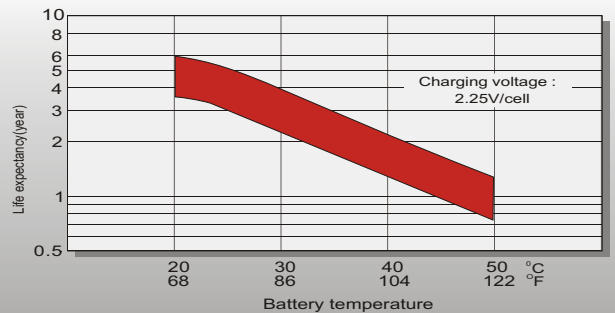
## Float Charging Characteristics



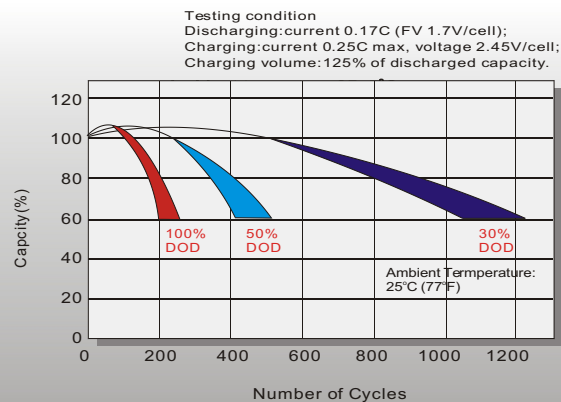
## Temperature Effects in Relation to Batter Capacity



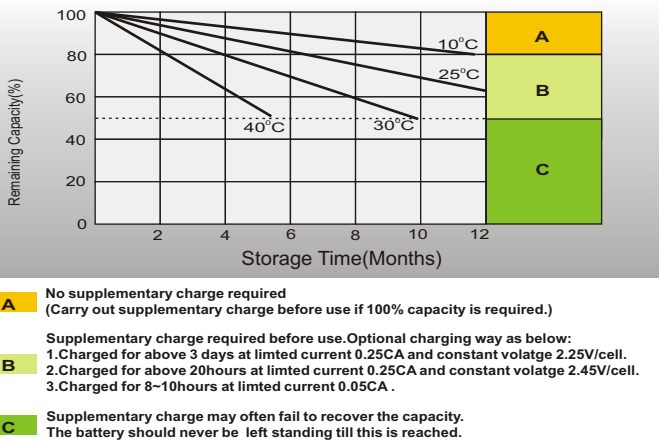
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## Self Discharge Characteristics



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