

LP SERIES-General Purpose

LP12-4.0 (12V4.0AH)

Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	4.0AH	
Dimension	Length	90±1mm (3.54 inches)
	Width	70±1mm (2.76 inches)
	Container Height	101±2mm (3.98 inches)
	Total Height (with Terminal)	107±2mm (4.21 inches)
Approx Weight	Approx 1.48 kg (3.26lbs)	
Terminal	T1	
Container Material	ABS	
Rated Capacity	4.0 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 40mΩ	
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	
	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	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

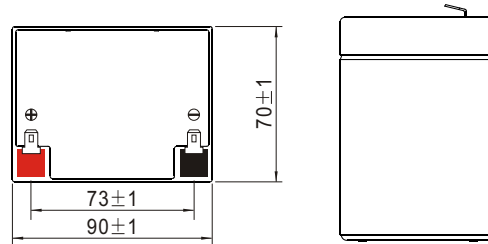
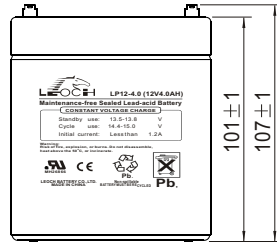
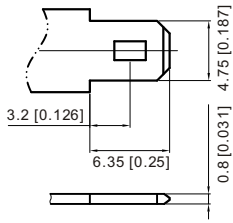
Constant Power Discharge (Watts) at 25 °C (77°F)

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

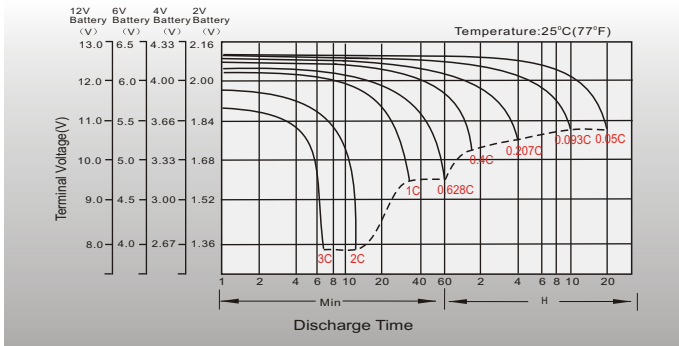
Dimensions

T1 Terminal

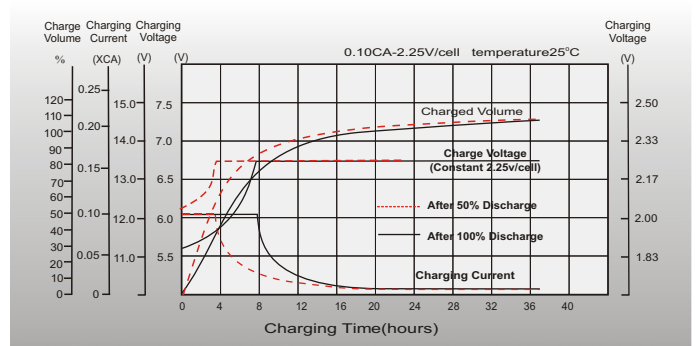
Unit: mm [inches]



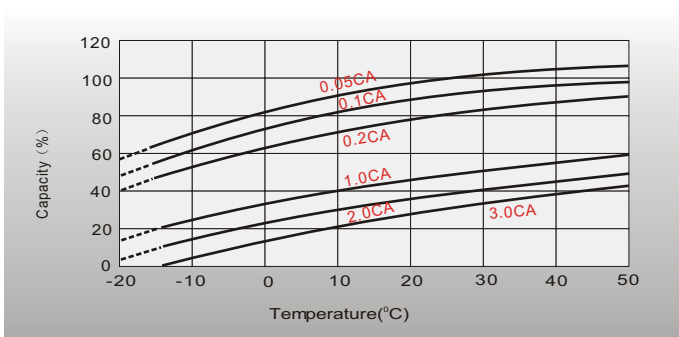
Discharge Characteristics



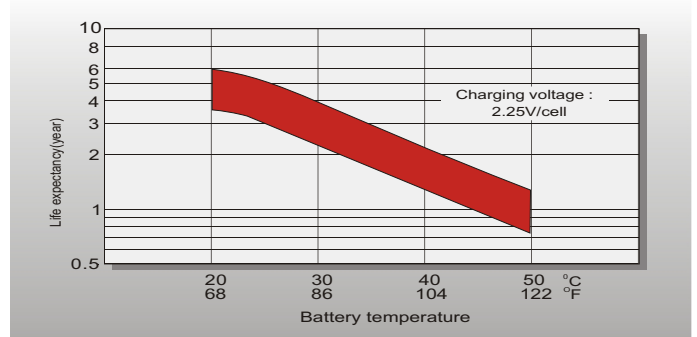
Float Charging Characteristics



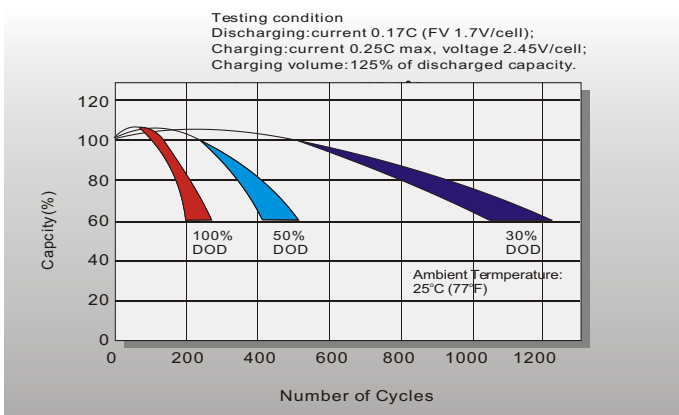
Temperature Effects in Relation to Batter Capacity



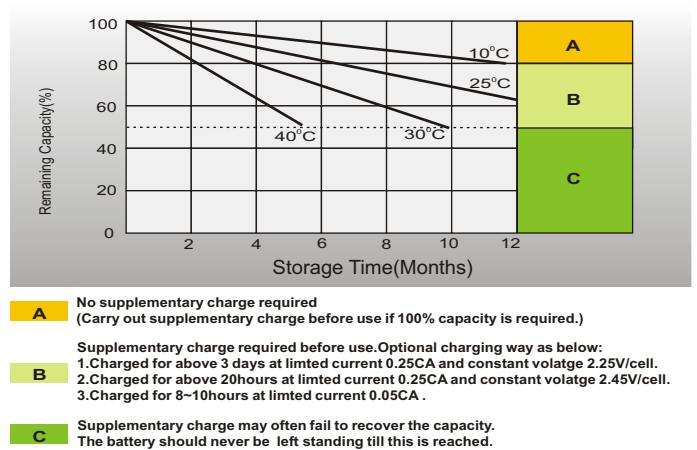
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



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