

LP SERIES-General Purpose

LP4-0.4 (4V0.4AH)

Specification

Nominal Voltage	4V	
Nominal Capacity(20HR)	0.4AH	
Dimension	Length	35 ± 1mm (1.38 inches)
	Width	22 ± 1mm (0.87 inches)
	Container Height	40 ± 1mm (1.57 inches)
	Total Height (with Terminal)	46 ± 1mm (1.81 inches)
Approx Weight	Approx 0.057kg (0.126lbs)	
Terminal	\	
Container Material	ABS	
Rated Capacity	0.40 AH/0.02A	(20hr, 1.80V/cell, 25°C/77°F)
	0.37 AH/0.037A	(10hr, 1.80V/cell, 25°C/77°F)
	0.34 AH/0.068A	(5hr, 1.75V/cell, 25°C/77°F)
	0.306 AH/0.102A	(3hr, 1.75V/cell, 25°C/77°F)
	0.251 AH/0.251A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	6A (5s)	
Internal Resistance	Approx 200mΩ	
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 0.12A. Voltage	
	4.8V~5.0V at 25°C(77°F)Temp. Coefficient -10mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	4.5V~4.6V at 25°C(77°F)Temp. Coefficient -6mV/°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

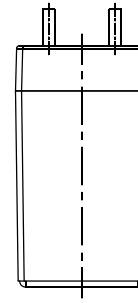
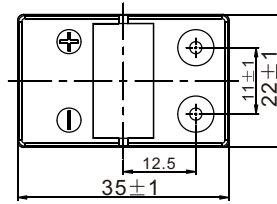
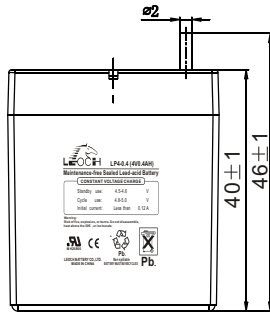
Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	0.76	0.585	0.485	0.419	0.324	0.239	0.201	0.119	0.093	0.076	0.062	0.054	0.043	0.036	0.020
1.80V/cell	1.02	0.747	0.585	0.495	0.382	0.278	0.225	0.130	0.100	0.081	0.066	0.057	0.046	0.037	0.020
1.75V/cell	1.15	0.821	0.639	0.533	0.397	0.288	0.236	0.135	0.102	0.083	0.068	0.059	0.047	0.038	0.020
1.70V/cell	1.27	0.895	0.683	0.560	0.413	0.300	0.243	0.138	0.105	0.085	0.070	0.060	0.047	0.039	0.021
1.65V/cell	1.40	0.966	0.726	0.595	0.436	0.307	0.249	0.140	0.109	0.088	0.072	0.062	0.048	0.040	0.021
1.60V/cell	1.54	1.049	0.776	0.634	0.460	0.320	0.251	0.146	0.113	0.090	0.074	0.063	0.048	0.040	0.021

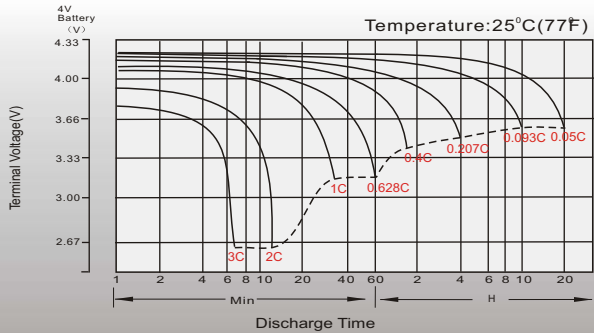
Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	1.39	1.08	0.90	0.79	0.617	0.459	0.388	0.231	0.181	0.148	0.121	0.105	0.085	0.071	0.039
1.80V/cell	1.85	1.36	1.08	0.92	0.717	0.529	0.432	0.250	0.194	0.157	0.129	0.112	0.090	0.074	0.040
1.75V/cell	2.04	1.48	1.16	0.98	0.739	0.544	0.450	0.259	0.197	0.160	0.132	0.115	0.092	0.075	0.040
1.70V/cell	2.19	1.57	1.22	1.02	0.765	0.564	0.463	0.265	0.202	0.164	0.135	0.117	0.093	0.077	0.041
1.65V/cell	2.38	1.68	1.29	1.08	0.800	0.573	0.470	0.267	0.210	0.169	0.139	0.120	0.094	0.078	0.041
1.60V/cell	2.56	1.78	1.36	1.14	0.839	0.594	0.472	0.277	0.215	0.174	0.143	0.122	0.095	0.079	0.041

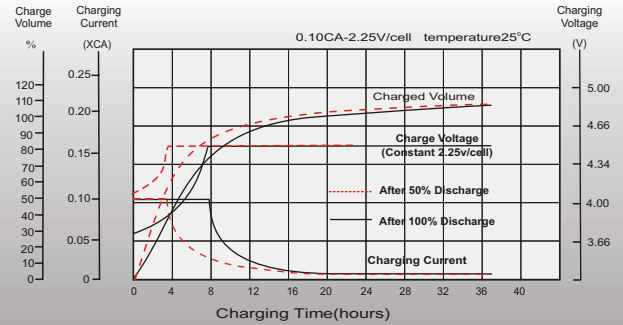
Dimensions



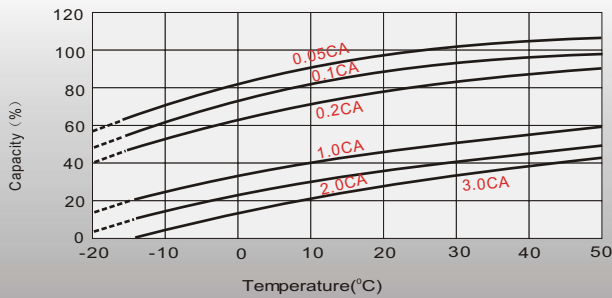
Discharge Characteristics



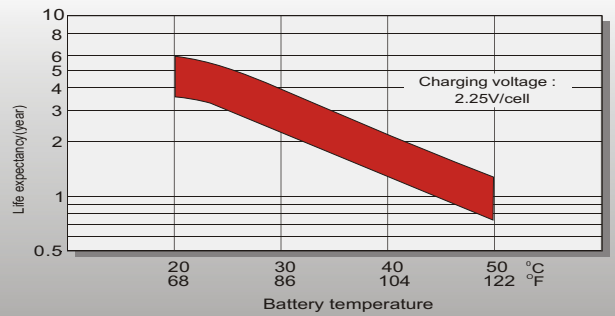
Float Charging Characteristics



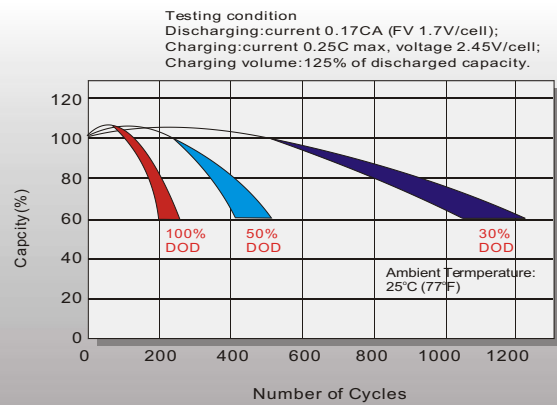
Temperature Effects in Relation to Battery Capacity



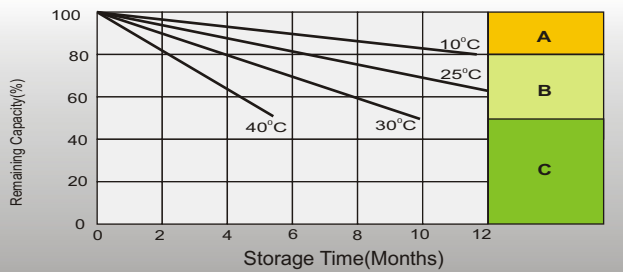
Effect of Temperature on Long Term Float Life



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

China sales office:
 Add: 5th Floor, Xinbaohui Bldg., Nanhai Blvd.,
 Nanshan, Shenzhen, China. 518052
 Tel: +86-755-86036060 (100 lines)
 Fax: +86-755-26067269
 E-mail: export@leoch.com

North America sales office:
 Add: 19751 Descartes, Unit A,
 Foothill Ranch, CA 92610, USA
 Tel: 949-588-5853
 Fax: 949-588-5966
 E-mail: sales@leoch.us

Europe sales office:
 Add: 9B Wheatstone Park, Waterwells
 Business Park, Gloucester, GL2 2AQ. UK.
 Tel: +44(0) 1452 729428
 Fax: +44 (0)1452-690125
 E-mail: Sales.Europe@leoch.com