



LP SERIES-General Purpose

491460210 (12V24AH)

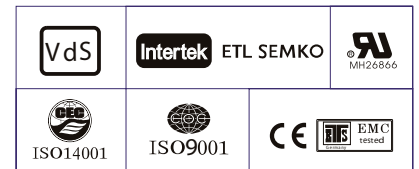
Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	24.0AH	
Dimension	Length	166.5 ± 1mm (6.56 inches)
	Width	175 ± 1mm (6.89 inches)
	Container Height	125 ± 1mm (4.92 inches)
	Total Height (with Terminal)	125 ± 1mm (4.92 inches)
	Approx Weight	Approx 7.8 kg (15.88lbs)
Terminal	T3 / T12	
Container Material	ABS	
Rated Capacity	24.0 AH/1.20A	(20hr, 1.80V/cell, 25 °C/77 °F)
	22.3 AH/2.23A	(10hr, 1.80V/cell, 25 °C/77 °F)
	20.4 AH/4.08A	(5hr, 1.75V/cell, 25 °C/77 °F)
	18.4 AH/6.12A	(3hr, 1.75V/cell, 25 °C/77 °F)
	15.1 AH/15.1A	(1hr, 1.60V/cell, 25 °C/77 °F)
Max. Discharge Current	360A (5s)	
Internal Resistance	Approx 14m Ω	
Operating Temperature Range	Discharge :	-15 ~ 50°C (5 ~ 122°F)
	Charge :	0 ~ 40°C (32 ~ 104°F)
	Storage :	-15 ~ 40°C (5 ~ 104°F)
Nominal Operating Temperature Range	25 ± 3°C (77 ± 5°F)	
Cycle Use	Initial Charging Current	less than 7.2A. 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)

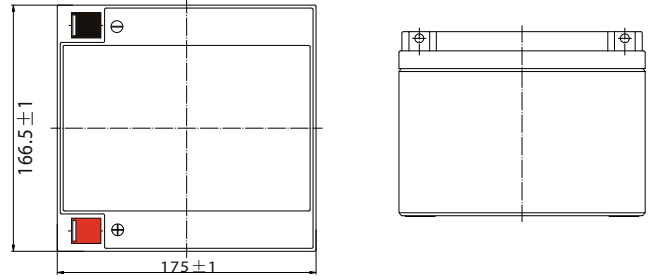
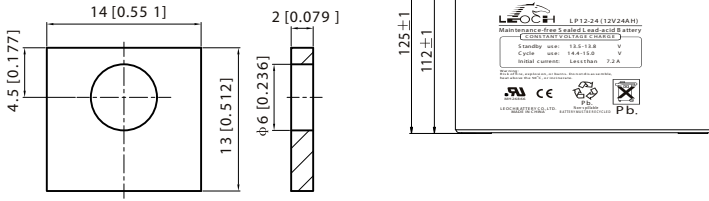
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	45.7	35.1	29.1	25.1	19.4	14.32	12.07	7.14	5.58	4.54	3.70	3.21	2.59	2.16	1.19
1.80V/cell	61.3	44.8	35.1	29.7	22.9	16.7	13.52	7.79	6.01	4.85	3.97	3.45	2.75	2.23	1.20
1.75V/cell	69.2	49.3	38.4	32.0	23.8	17.3	14.14	8.08	6.12	4.96	4.08	3.54	2.80	2.29	1.21
1.70V/cell	76.2	53.7	41.0	33.6	24.8	18.0	14.59	8.28	6.29	5.09	4.18	3.61	2.84	2.34	1.23
1.65V/cell	84.0	58.0	43.6	35.7	26.1	18.4	14.93	8.40	6.56	5.26	4.30	3.69	2.88	2.39	1.25
1.60V/cell	92.6	62.9	46.6	38.0	27.6	19.2	15.07	8.76	6.76	5.43	4.44	3.77	2.91	2.41	1.26

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

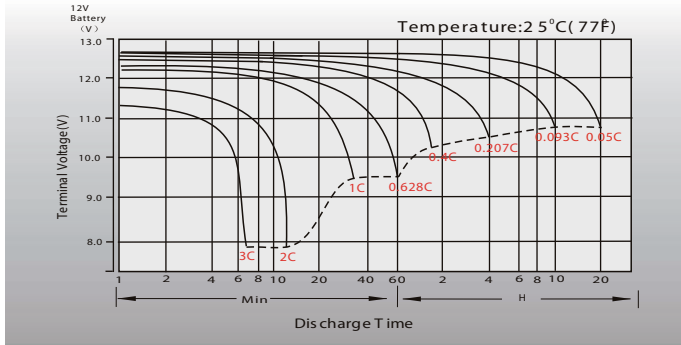
F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	83.6	64.8	54.3	47.4	37.0	27.5	23.3	13.9	10.9	8.88	7.26	6.32	5.12	4.28	2.35
1.80V/cell	111.0	81.9	64.7	55.2	43.0	31.8	25.9	15.0	11.6	9.43	7.76	6.75	5.41	4.41	2.37
1.75V/cell	122.5	88.5	69.8	58.8	44.3	32.6	27.0	15.5	11.8	9.60	7.93	6.91	5.49	4.52	2.39
1.70V/cell	131.1	94.3	73.4	61.3	45.9	33.8	27.8	15.9	12.1	9.84	8.12	7.04	5.56	4.61	2.44
1.65V/cell	142.5	100.8	77.5	64.7	48.0	34.4	28.2	16.0	12.6	10.1	8.32	7.18	5.64	4.70	2.47
1.60V/cell	153.6	107.0	81.5	68.1	50.3	35.6	28.3	16.6	12.9	10.4	8.56	7.31	5.68	4.74	2.48

Dimensions

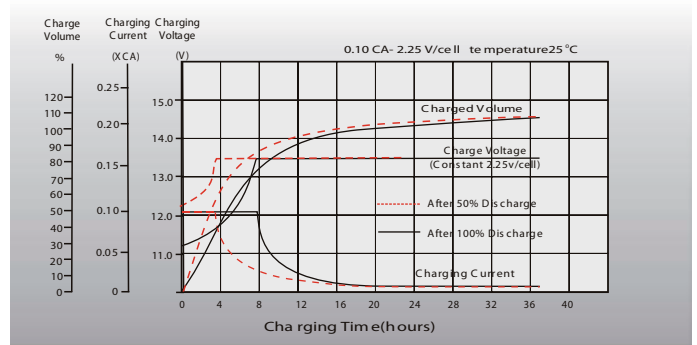
T3 Terminal Unit: mm [inches]



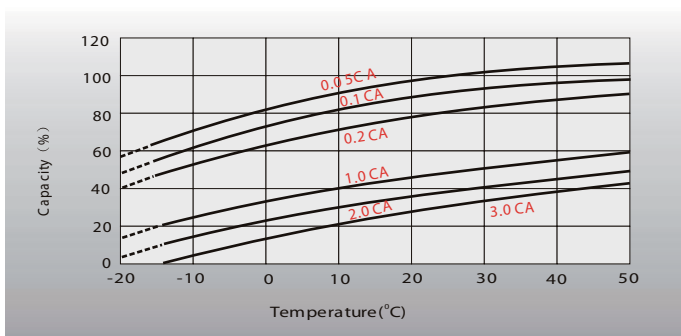
Discharge Characteristics



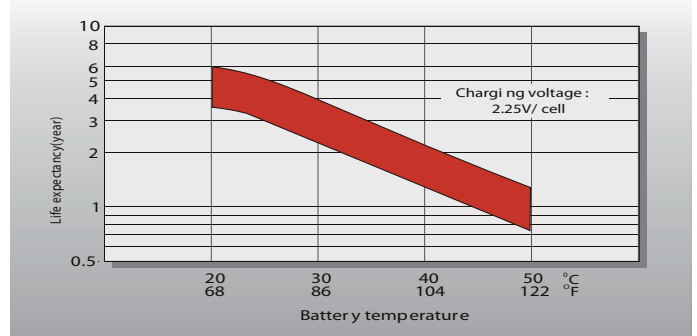
Float Charging Characteristics



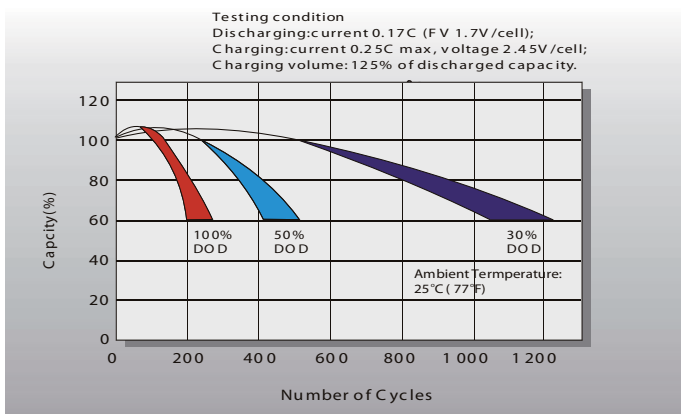
Temperature Effects in Relation to Battery Capacity



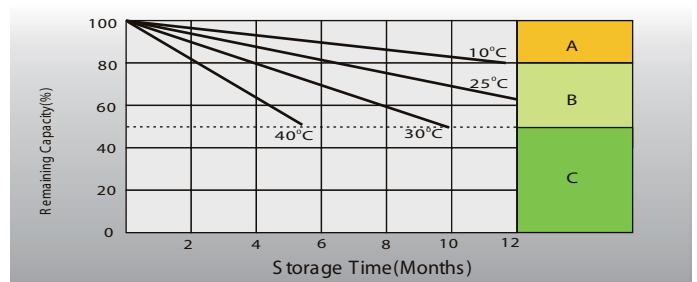
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



- A** No supplementary charge required (Carry out supplementary charging before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging ways as below:
1. Charged for a above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2. Charged for a above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
3. Charged for 8 ~10 hours at limited current 0.05 CA.
- C** Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.