



LIVEN LEVG Series-GEL Deep Cycle

- For longer cycle life: special paste formula, over dimensioned negative plate, optimised manufacturing process, additives for deep discharge. Up to 10 years
- Special anti-vibration desing
- Thick plates, special formula of paste and plate manufacturing process for a long service life
- ABS material: increase the strenght of battery container
- Special plate desing, long cycle life
- Using special lead-calcium alloy to boost up the grid anti-corrosive performance and extend the battery using life
- Special separators boost up the battery internal performance
- High thermal capacity, reduce the risk of thermal runaway and drying up, can be used in por environment
- High gas recombination efficiency
- Little wáter losing, no electrolyte stratification phenomenon
- Long storage time
- Good deep discharge resilience performance

Application:

- Railway and marine systems
- Electric toys
- Electric tools
- Portable power
- Vehicle in place of walking
- Wheelchairs
- Lawn mowers
- Medical equipments.
- Golf trolleys and golf cart

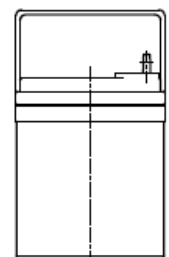
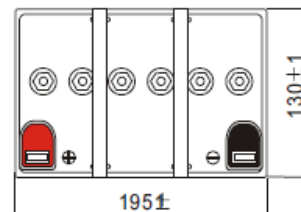
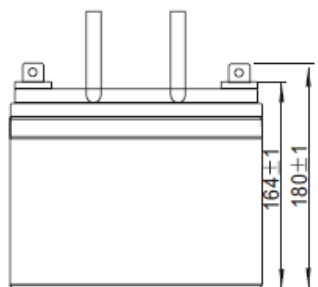
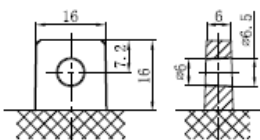


Specification:

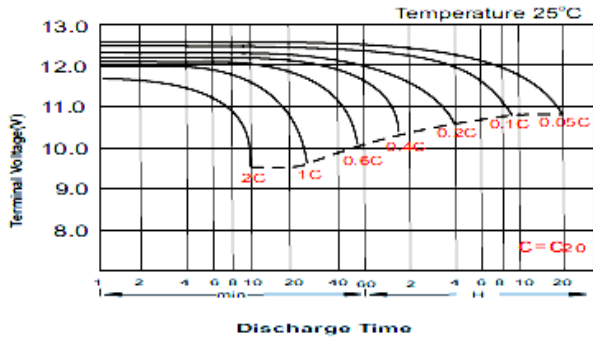
Nominal Voltage	12V	
Nominal Capacity(20HR)	32.0 AH	
Dimension	Length	195 ± 2mm (7.68 inches)
	Width	130 ± 2mm (5.12 inches)
	Container Height	164 ± 2mm (6.46 inches)
	Total Height (with Terminal)	180 ± 2mm (7.09 inches)
Approx Weight	Approx 10.7 kg (23.59lbs)	
Terminal	T5/T6	
Container Material	ABS	
Max. Discharge Current	300A (5s)	
Internal Resistance	Approx 14.6mΩ	
Operating Temp.Range	Discharge	: -20~55°C (-4~131°F)
	Charge	: 0~40°C (32~104°F)
	Storage	: -20~50°C (-4~122°F)
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)	
Cycle Use	Initial Charging Current less than 6.0A.Voltage	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C
	No limit on Initial Charging Current Voltage	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C
Standby Use	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Capacity affected by Temperature	LIVEN LEVG series batteries may be stored for up to 9 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	
Self Discharge		

Outer Dimensions:

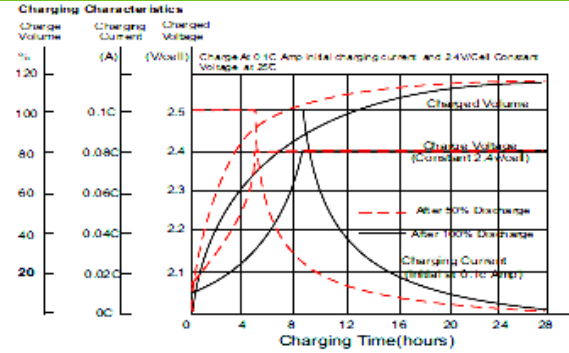
■ T5 Terminal Unit: mm



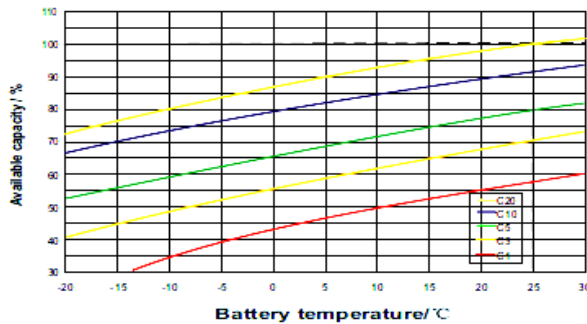
Discharge Characteristics



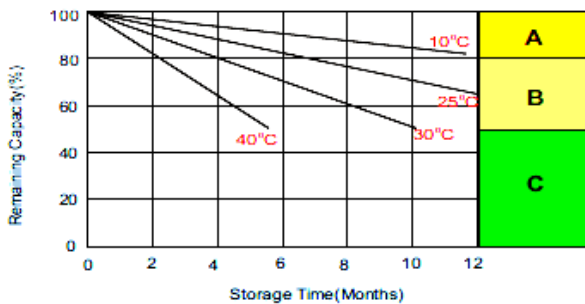
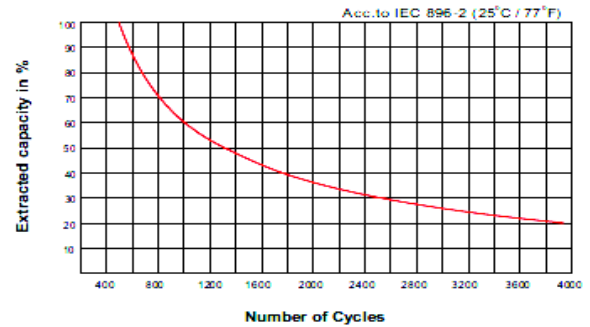
Capacity Retention Characteristic



Temperature Effects in Relation to Capacity



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.

Constant Current Discharge (CC, Unit: A) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	36.5	31.0	27.0	21.0	16.0	13.3	8.36	6.30	5.16	4.42	3.84	3.10	2.63	1.54
1.80V/cell	44.9	36.8	31.7	23.9	17.9	14.8	9.09	6.80	5.53	4.69	4.07	3.26	2.76	1.60
1.75V/cell	50.5	41.0	34.7	25.8	19.1	15.7	9.53	7.12	5.75	4.85	4.20	3.34	2.80	1.61
1.70V/cell	56.3	44.6	37.0	27.1	20.0	16.4	10.0	7.36	5.91	4.98	4.31	3.42	2.85	1.63
1.67V/cell	60.3	47.0	38.9	28.4	20.7	17.0	10.3	7.58	6.05	5.10	4.40	3.47	2.90	1.65
1.60V/cell	65.8	50.4	41.6	30.0	21.9	17.8	10.6	7.82	6.23	5.24	4.50	3.52	2.94	1.67

Constant Power Discharge (CP, Unit: W) at 25°C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	68.6	58.6	51.6	40.3	30.9	25.9	16.3	12.3	10.1	8.70	7.58	6.14	5.22	3.08
1.80V/cell	83.1	68.6	59.6	45.5	34.4	28.7	17.6	13.2	10.8	9.21	8.02	6.46	5.48	3.20
1.75V/cell	92.0	75.5	64.6	48.8	36.5	30.2	18.4	13.8	11.2	9.49	8.26	6.61	5.56	3.22
1.70V/cell	101.1	81.3	68.4	51.0	38.0	31.4	19.3	14.3	11.5	9.73	8.47	6.75	5.65	3.26
1.67V/cell	107.1	84.8	71.3	52.9	39.2	32.3	19.7	14.6	11.7	9.95	8.61	6.84	5.73	3.30
1.60V/cell	114.8	89.7	75.5	55.5	41.1	33.7	20.3	15.0	12.0	10.2	8.79	6.92	5.81	3.34