



#### LIVEN LEVG Series

LEVG Pure Gel series are manufacturing with special PVC-SiO2 separator and patented GEL electrolyte. The LEVG series Valve Regulated Lead Acid (VRLA) is Pure Gel with 12 years floating design life. This battery its ideal for light traction electric vehicles applications (wheelchairs, electric sweepers, golf trolleys...). Maintenance-Free Sealed Lead Acid Battery.

The number of deep discharge cycles its 450 cycles at 100% DOD and 1300 cycles at 50%.

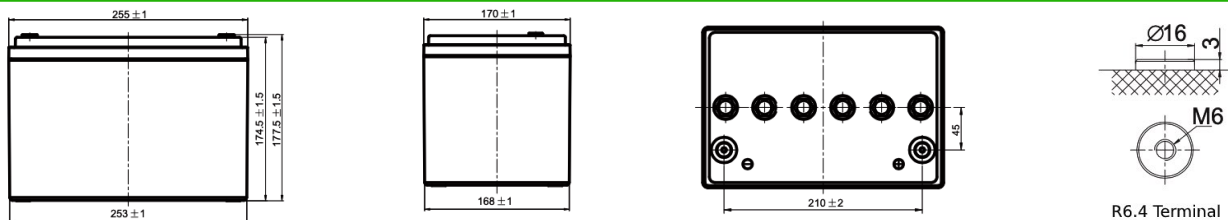
#### Applications:

- Wheelchairs
- Golf trolleys
- Electric sweepers
- Floor machines
- Electric vehicles
- Lawn mowers
- Portable power
- Medical equipments

#### Dimensions:

Length	255±1.5mm (10.0in)
Width	170±1.5mm (6.69in)
Height	174.5±1.5mm (6.87in)
Total Height	177.5±1.5mm (6.99in)

#### Technical Drawings:



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

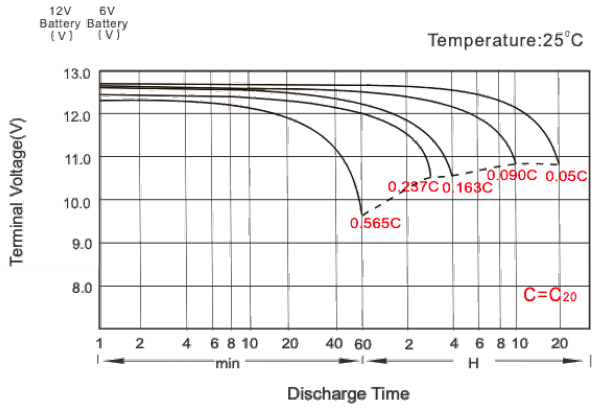
F.V. / Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
<b>1.60V</b>	122.2	94.3	79.7	59.2	43.8	35.50	20.30	15.30	12.10	9.95	8.41	6.35	5.25	3.08
<b>1.67V</b>	113.7	89.4	75.6	56.8	42.1	34.40	19.90	15.10	11.90	9.75	8.27	6.29	5.20	3.05
<b>1.75V</b>	98.4	80.5	69.6	53.1	39.9	32.70	19.20	14.70	11.70	9.50	8.14	6.18	5.15	3.03
<b>1.80V</b>	80.1	66.8	59.1	46.0	35.3	29.20	17.90	14.10	11.30	9.21	7.89	6.08	5.00	3.00
<b>1.85V</b>	67.0	58.0	52.2	41.5	31.6	26.40	16.20	12.90	10.40	8.75	7.46	5.84	4.90	2.79

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

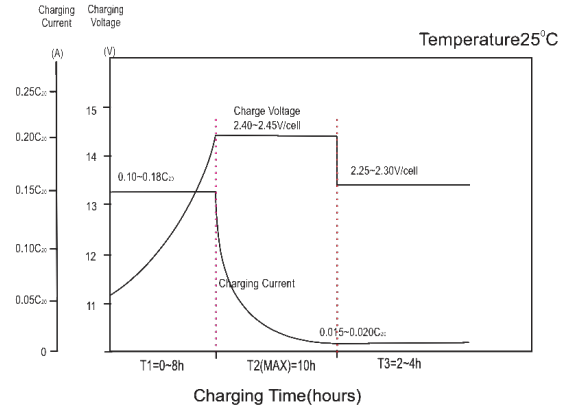
F.V. / Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
<b>1.60V</b>	1375.0	1061.9	896.9	666.7	492.8	399.6	232.2	176.4	139.8	115.8	97.8	74.4	61.8	35.7
<b>1.67V</b>	1293.3	1017.1	859.5	645.5	478.6	391.2	229.2	175.2	138.0	114.0	97.2	73.8	61.8	35.3
<b>1.75V</b>	1132.2	926.1	800.3	611.0	458.9	376.2	222.0	171.6	136.2	111.0	96.0	73.2	61.2	34.9
<b>1.80V</b>	927.0	772.3	683.6	532.3	408.3	337.8	208.2	165.0	132.6	108.0	93.0	72.0	59.5	34.6
<b>1.85V</b>	780.1	675.4	607.5	483.2	368.2	307.2	190.2	151.2	123.0	103.2	88.2	69.6	58.4	32.2

Specifications:	
<b>Cells Per Unit</b>	6
<b>Voltage Per Unit</b>	12V
<b>Nominal Capacity</b>	60.0Ah @20hour-rate to 1.80V per cell @25°C
<b>Weight</b>	Approx. 19.5Kg ±2% (43.0lbs)
<b>Internal Resistance</b>	Approx. 8.5mΩ
<b>Terminal</b>	R6.4
<b>Max. Discharge Current</b>	500A (5sec)
<b>Design Life</b>	12 years floating Eurobat (20°C): 10-12 years Long Life
<b>Recommended Max. Charging Current</b>	6.0A
<b>Standby Use Voltage</b>	13.5V~13.8V @ 25°C Temperature Compensation: -3mV/°C/Cell
<b>Cycle Use Voltage</b>	14.1V~14.4V @ 25°C Temperature Compensation: -4mV/°C/Cell
<b>Operating Temperature Range</b>	Discharge: -20°C~55°C Charge: 0°C~40°C Storage: -20°C~50°C
<b>Normal Operating Temperature Range</b>	25°C±5°C
<b>Self Discharge</b>	LIVEN Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charge batteries before using.
<b>Container Material</b>	A.B.S. UL94-HB, UL94-V0 Optional.

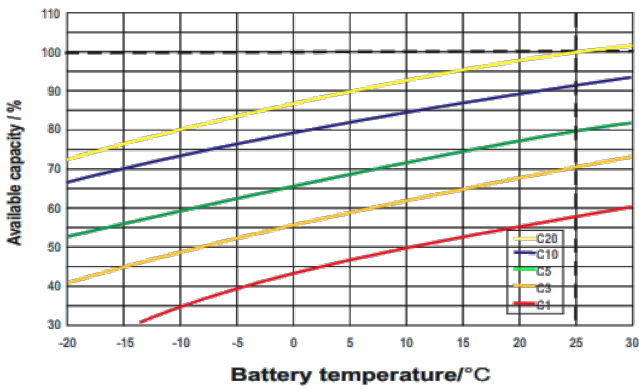
**Discharge Characteristics**



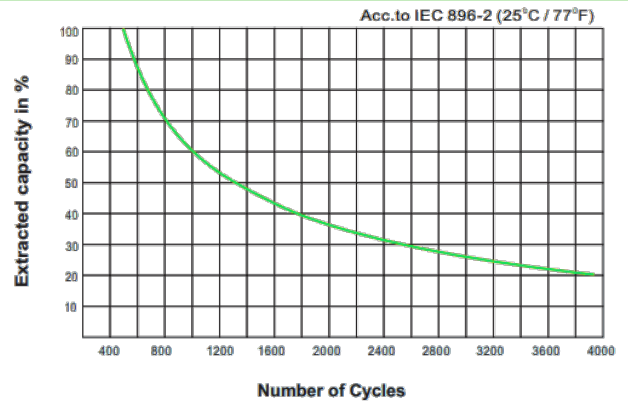
**Charging Characteristics**



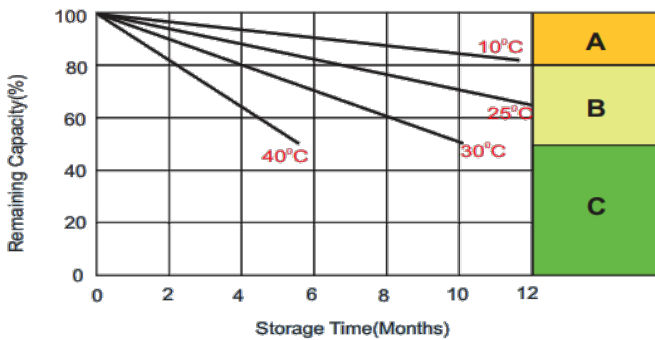
**Temperature Effects in Relation to Capacity**



**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.

(Note) All above information shall be changed without prior notice. LIVEN Battery reserves the right to explain and update the latest information.