



LIVEN LVH Series

AGM (Absorbent Glass Material) technology with gas recombination. The LVH series Valve Regulated Lead Acid (VRLA) battery is designed for heavy load discharge applications with 8 years design life in float service.

By using strong grids and specially designed active material is with lower I.R, lower self discharge rate, high power, and longer service life performance.

Generally the LVH series offers 30% more power output than the standard range.

Applications:

- High Power
- UPS
- Datacenters
- Emergency backup PW
- Security system
- Communication power supply
- DC power supply
- Electric Tools

Dimensions:

Length	90±1mm (3.54in)
Width	70±1mm (2.76in)
Height	101±1mm (3.98in)
Total Height	106±1mm (4.17in)

Specifications:

Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	22W @15min-rate to 1.67V per cell @25°C
Weight	Approx. 1.60Kg ±2% (3.53lbs)
Internal Resistance	Approx. 30mΩ
Terminal	F2
Max. Discharge Current	55A (5sec)
Design Life	8 years floating Eurobat (20°C): 6-9 years General Purpose
Recommended Maximum Charging Current	1.65A
Reference Capacity	C20 5.5Ah
Standby Use Voltage	13.7V~13.9V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.6V~14.8V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -15°C~50°C Charge: -10°C~45°C Storage: -15°C~50°C
Normal Operating Temperature Range	25°C±5°C

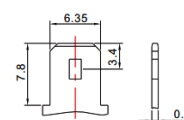
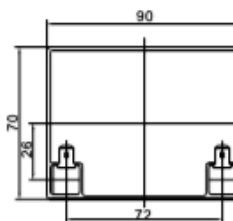
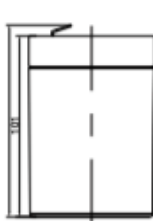
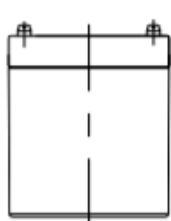
Self Discharge

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.

Container Material

A.B.S. UL94-HB, UL94-V0 Optional.

Technical Drawings:



F2 Terminal

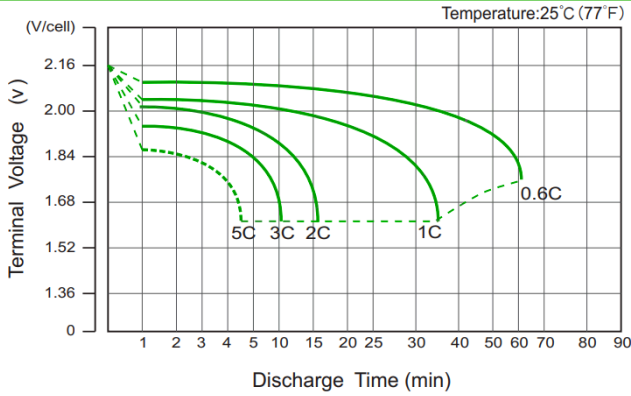
Constant Current Discharge (CC, Unit: A) at 25°C (77°F)

F.V./ Time	3min	5min	8min	10min	15min	20min	30min	60min	90min
1.60V	28.69	25.22	20.15	17.27	12.74	10.01	7.136	4.002	2.837
1.67V	26.03	22.88	18.43	15.92	11.92	9.453	6.762	3.814	2.715
1.70V	24.91	21.90	17.69	15.34	11.55	9.201	6.594	3.731	2.665
1.75V	23.07	20.28	16.48	14.38	10.91	8.742	6.319	3.606	2.584
1.80V	21.13	18.58	15.24	13.41	10.36	8.330	6.043	3.470	2.492
1.85V	18.07	15.88	12.98	11.39	8.88	7.235	5.344	3.137	2.280

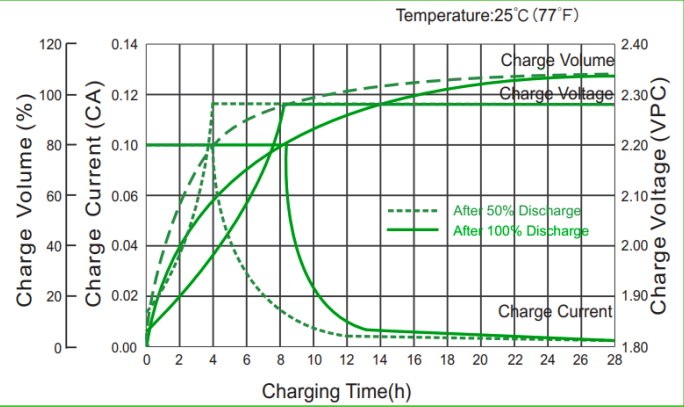
Constant Power Discharge (CP, Unit: W/Battery) at 25°C (77°F)

F.V./ Time	3min	5min	8min	10min	15min	20min	30min	60min	90min
1.60V	309.3	271.9	218.0	187.6	139.7	110.6	79.1	45.0	32.2
1.67V	284.2	249.8	202.1	175.4	132.0	105.6	76.2	43.3	31.1
1.70V	274.4	241.2	195.6	170.2	129.2	103.3	74.4	42.6	30.6
1.75V	256.6	225.6	184.3	161.5	123.2	99.4	72.1	41.5	29.9
1.80V	238.3	209.5	172.4	152.3	117.7	95.5	69.7	40.3	29.1
1.85V	207.1	182.0	148.9	130.9	102.3	83.7	62.0	36.6	26.7

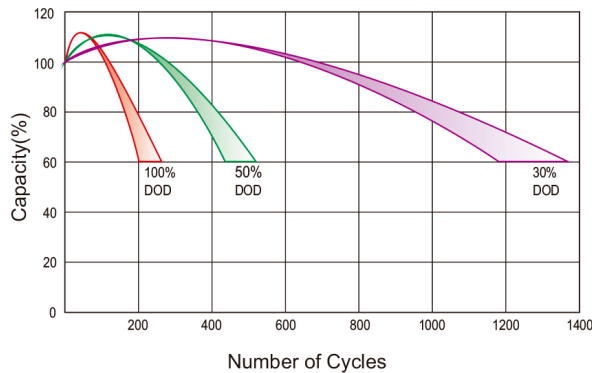
Discharge Characteristics Curve



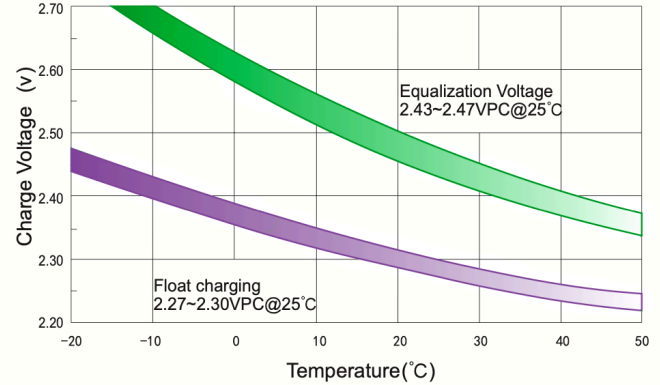
Charge Characteristic Curve For Standby Use



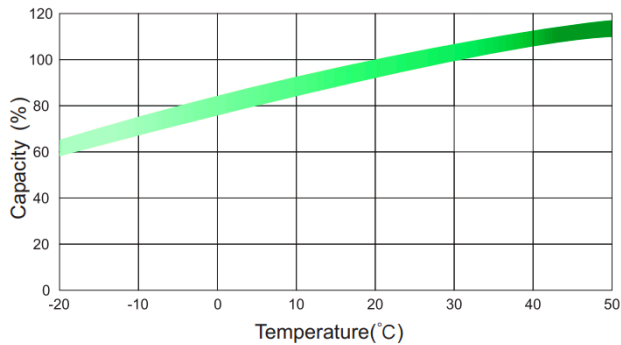
Cycle Life In Relation To Depth Of Discharge



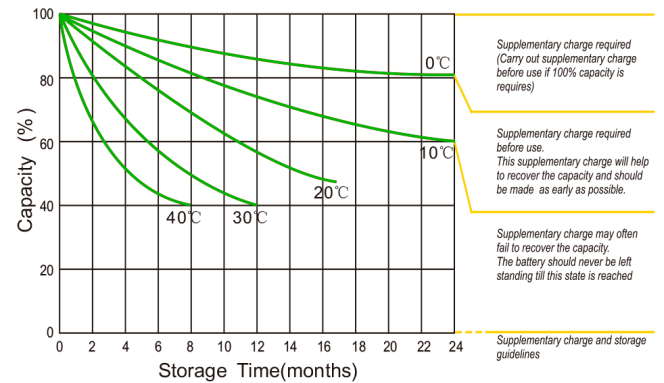
Relationship Between Charging Voltage And Temperature



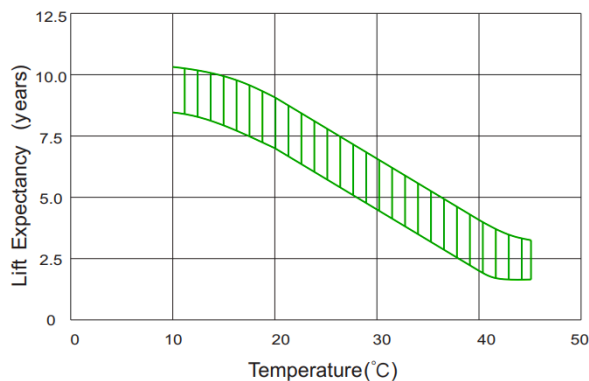
Temperature Effects On Capacity



Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use

