



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.

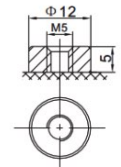
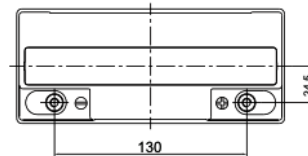
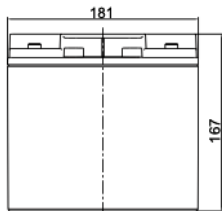
Applications:

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

Dimensions:

Length	181±1mm (7.13in)
Width	77±1mm (3.03in)
Height	167±1mm (6.57in)
Total Height	167±1mm (6.57in)

Technical Drawings:



R5.0 Terminal

Specifications:

Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	88W @15min-rate to 1.67V per cell @25°C
Weight	Approx. 6.30Kg ±2% (13.89lbs)
Internal Resistance	Approx. 10mΩ
Terminal	R5.0
Max. Discharge Current	220A (5sec)
Design Life	8 years floating Eurobat (20°C): 6-9 years General Purpose
Recommended Maximum Charging Current	6.6A
Reference Capacity	C20 22Ah
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.

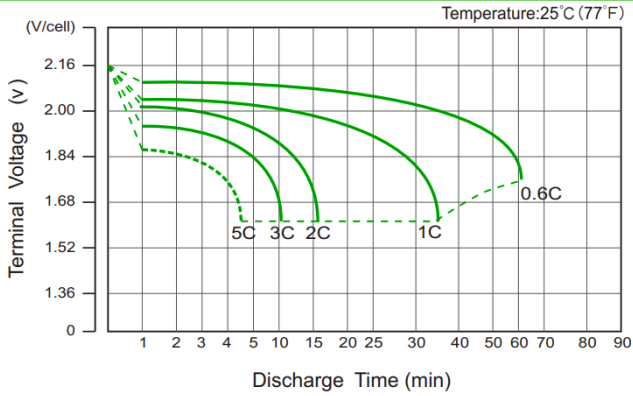
Constant Current Discharge (CC, Unit: A) at 25°C (77°F)

F.V./ Time	3min	5min	8min	10min	15min	20min	30min	60min	90min
1.60V	103.3	90.78	74.15	64.94	50.97	40.06	28.54	16.01	11.35
1.67V	93.72	82.38	67.80	59.86	47.67	37.81	27.05	15.26	10.86
1.70V	89.67	78.82	65.11	57.69	46.20	36.80	26.38	14.92	10.66
1.75V	83.06	73.01	60.65	54.06	43.63	34.97	25.27	14.42	10.33
1.80V	76.08	66.87	56.06	50.43	41.43	33.32	24.17	13.88	9.969
1.85V	65.05	57.18	47.77	42.81	35.53	28.94	21.38	12.55	9.118

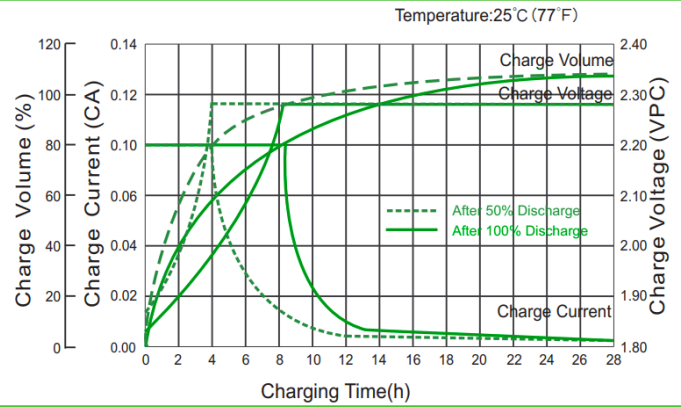
Constant Power Discharge (CP, Unit: W/Battery) at 25°C (77°F)

F.V./ Time	3min	5min	8min	10min	15min	20min	30min	60min	90min
1.60V	1113.6	978.6	802.2	705.0	558.8	442.5	316.5	180.1	128.9
1.67V	1023.0	899.4	743.4	659.4	528.0	422.3	304.7	173.3	124.5
1.70V	987.6	868.2	720.0	640.2	517.0	413.3	297.6	170.6	122.6
1.75V	924.0	812.4	678.0	607.2	492.8	397.6	288.2	165.8	119.4
1.80V	858.0	754.2	634.2	572.5	470.8	381.9	278.7	161.0	116.2
1.85V	745.2	655.2	548.1	491.9	409.2	334.7	248.0	146.6	106.7

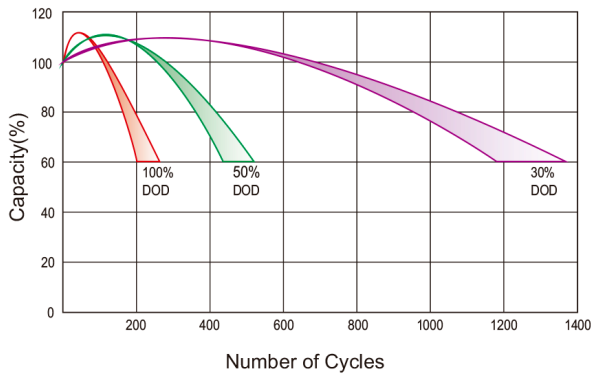
Discharge Characteristics Curve



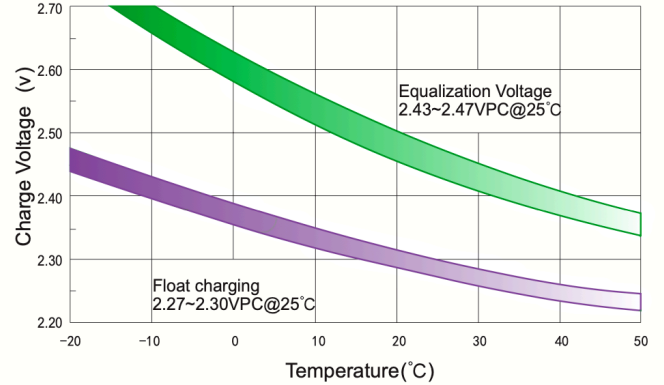
Charge Characteristic Curve For Standby Use



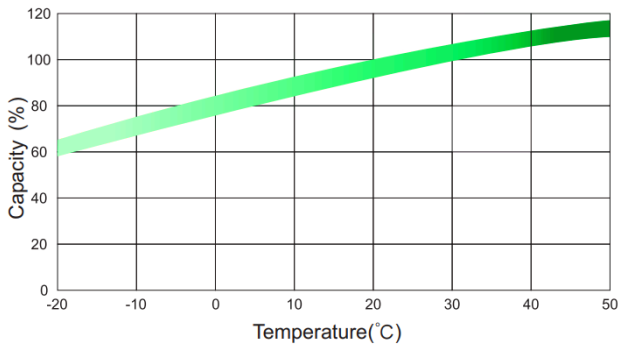
Cycle Life In Relation To Depth Of Discharge



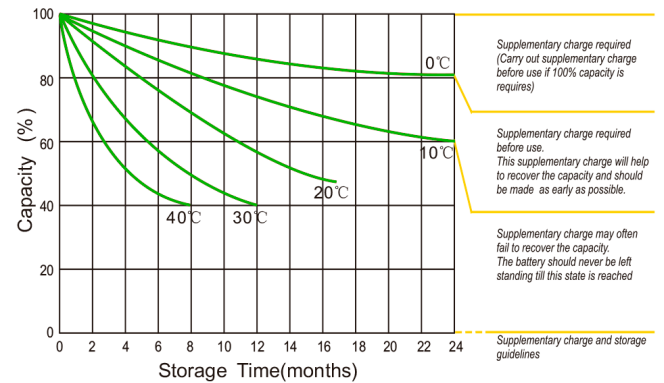
Relationship Between Charging Voltage And Temperature



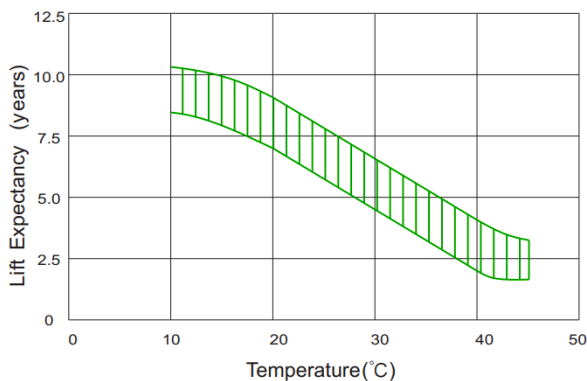
Temperature Effects On Capacity



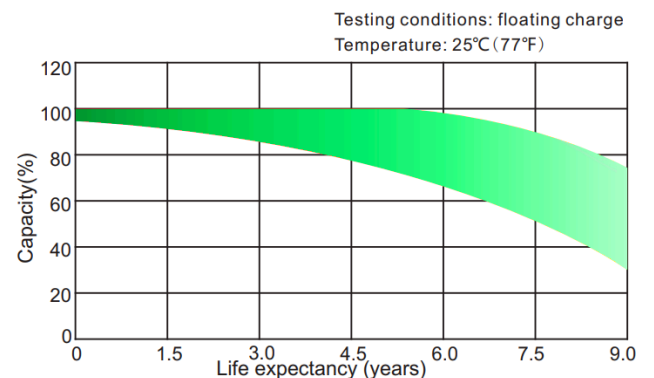
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



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