



### 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.

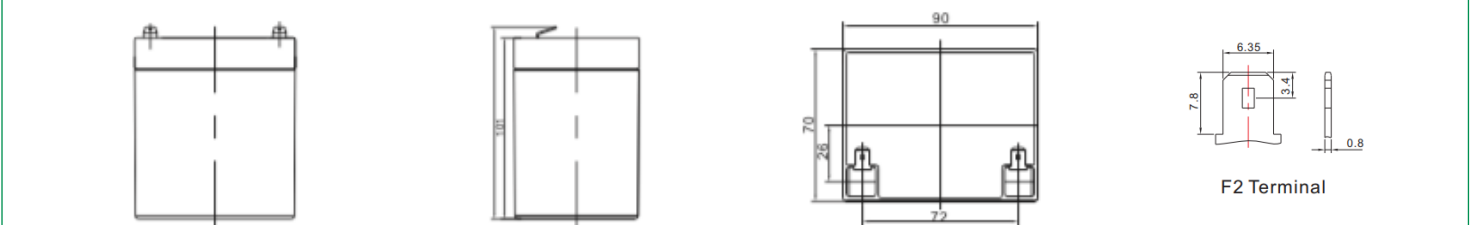
### Application:

- High Power
- Uninterrupted Power Supplies
- Datacenters
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Electric Tools

### Dimensions:

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

### Drawing:



### Specification:

<b>Cells Per Unit</b>	6
<b>Voltage Per Unit</b>	12
<b>Nominal Capacity</b>	22W@15min-rate to 1.67V per cell @25°C
<b>Weight</b>	Approx. 1.65 Kg ±2%
<b>Internal Resistance</b>	Approx. 25 mΩ
<b>Terminal</b>	F2
<b>Max. Discharge Current</b>	55A (5 sec)
<b>Design Life</b>	8 years floating Eurobat (20°C): 6-9 years General Purpose
<b>Recommended Maximum Charging Current</b>	1.5 A
<b>Reference Capacity</b>	C20 5.5AH
<b>Standby Use Voltage</b>	13.7 V~13.9 V @ 25°C Temperature Compensation: -3mV/°C/Cell
<b>Cycle Use Voltage</b>	14.6 V~14.8 V @ 25°C Temperature Compensation: -4mV/°C/Cell
<b>Operating Temperature Range</b>	Discharge: -15°C~50°C Charge: -10°C~45°C Storage: -15°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.



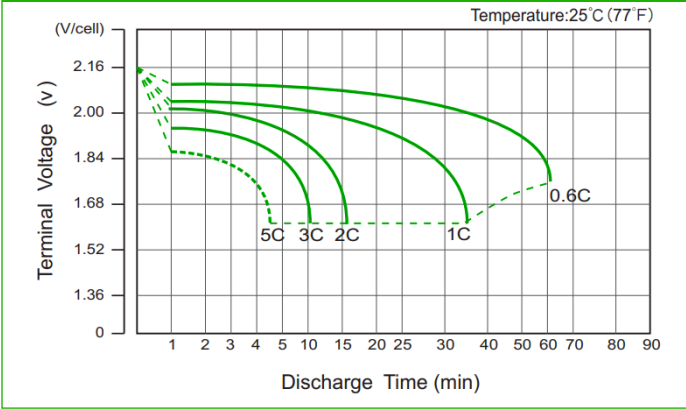
### Constant Current Discharge (CC, Unit: A) at 25°C (77°F)

F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	25.28	21.98	18.28	16.12	12.47	10.090	7.387	4.308	3.139
1.67V	23.39	20.34	17.14	15.13	11.82	9.412	7.042	4.105	2.989
1.70V	22.42	19.50	16.54	14.58	11.45	9.053	6.843	3.987	2.899
1.75V	21.18	18.41	15.71	13.69	10.91	8.805	6.650	3.922	2.834
1.80V	19.92	17.32	14.89	12.80	10.37	8.544	6.446	3.844	2.765
1.85V	18.59	16.16	14.00	11.87	9.78	8.246	6.208	3.752	2.683

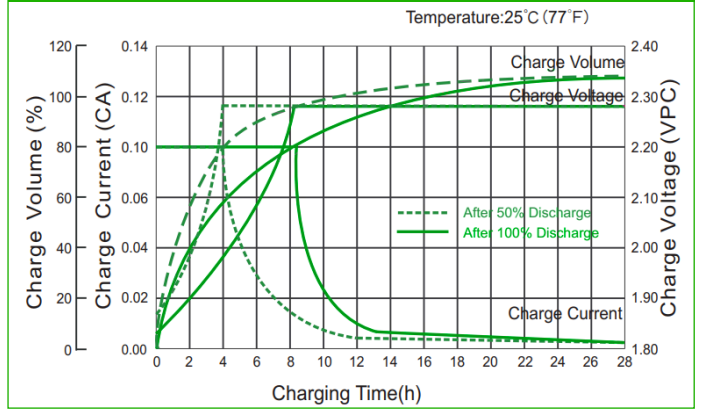
### Constant Power Discharge (CP, Unit: W/Battery) at 25°C (77°F)

F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	274.8	238.8	201.6	178.8	139.2	111.0	81.6	48.0	34.8
1.67V	256.8	223.2	190.8	169.2	133.2	105.0	78.6	46.2	33.6
1.70V	249.0	216.6	186.6	165.0	130.8	102.0	77.4	45.0	33.0
1.75V	238.2	207.0	179.4	157.2	126.0	100.2	76.2	45.0	32.4
1.80V	227.4	197.4	172.2	148.8	121.2	99.0	75.0	45.0	32.4
1.85V	216.0	187.8	165.6	141.0	117.0	97.2	73.2	44.4	31.8

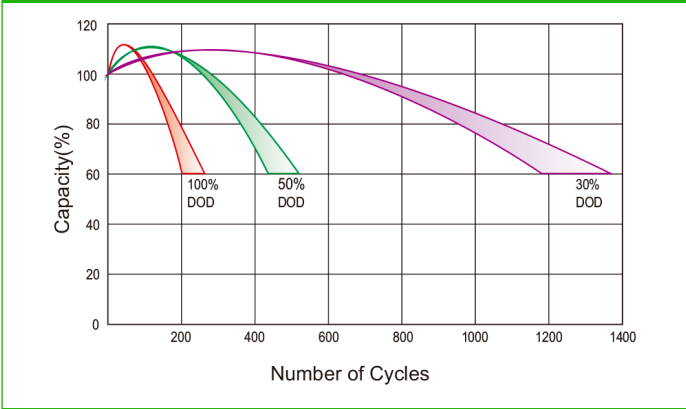
**Discharge Characteristics Curve**



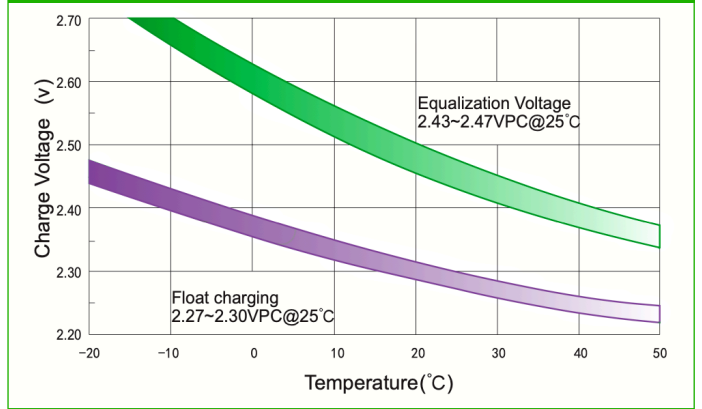
**Charge Characteristic Curve For Standby Use**



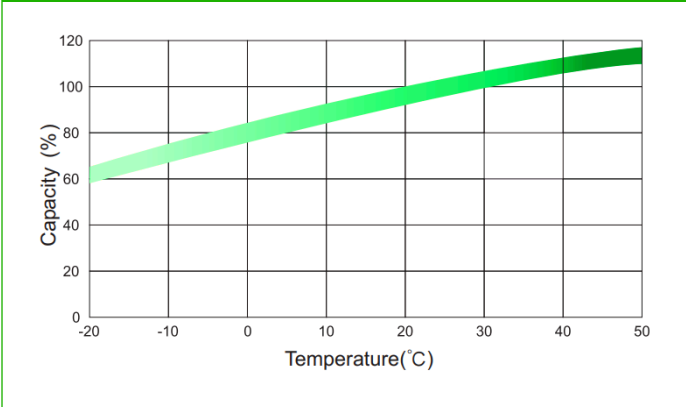
**Cycle Life In Relation To Depth Of Discharge**



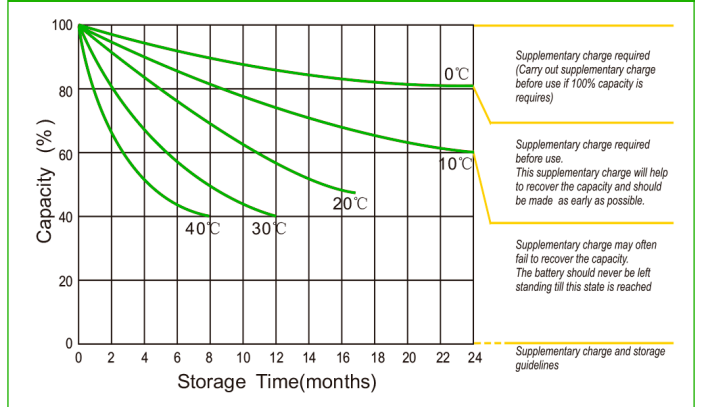
**Relationship Between Charging Voltage And Temperature**



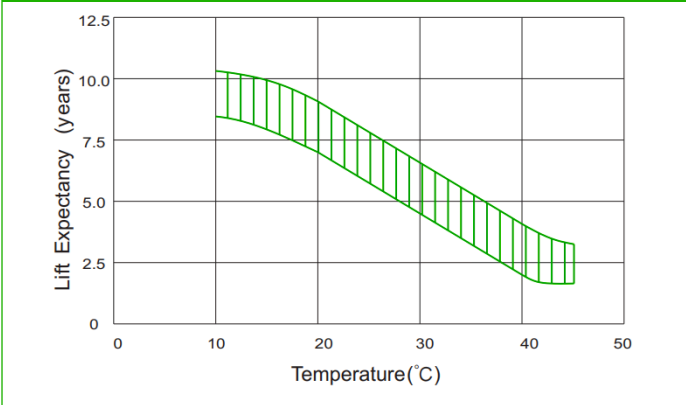
**Temperature Effects On Capacity**



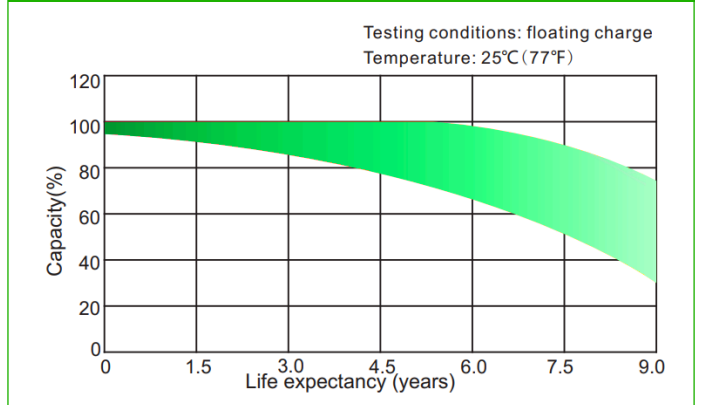
**Storage Characteristics**



**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.