

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

#### Dimensions:

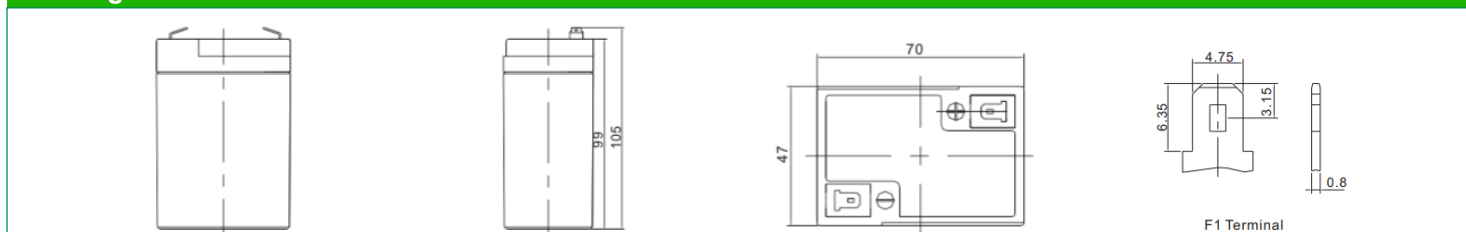
Length	70±1mm (2.76 inches)
Width	47±1mm (1.85 inches)
Height	99±1mm (3.90 inches)
Total Height	105±1mm (4.13 inches)

#### Specification:

Cells Per Unit	3
Voltage Per Unit	6
Nominal Capacity	22W@15min-rate to 1.67V per cell @25°C
Weight	Approx. 0.80 Kg ±2%
Internal Resistance	Approx. 16 mΩ
Terminal	F1
Max. Discharge Current	55A (5 sec)
Design Life	8 years floating Eurobat (20°C): 6-9 years General Purpose
Recommended Maximum Charging Current	1.65 A
Reference Capacity	C20 5.5AH
Standby Use Voltage	6.80 V~6.90 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	7.30 V~7.40 V @ 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.



#### Drawing:



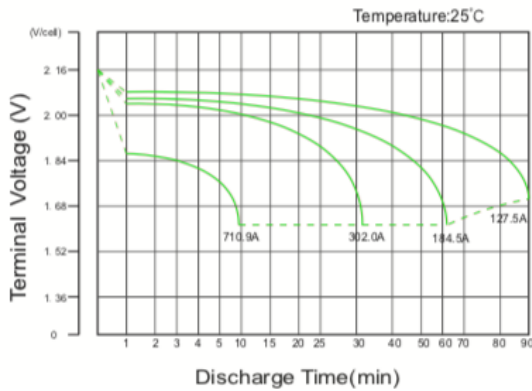
#### Constant Current Discharge (CC, Unit: A) at 25°C (77°F)

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

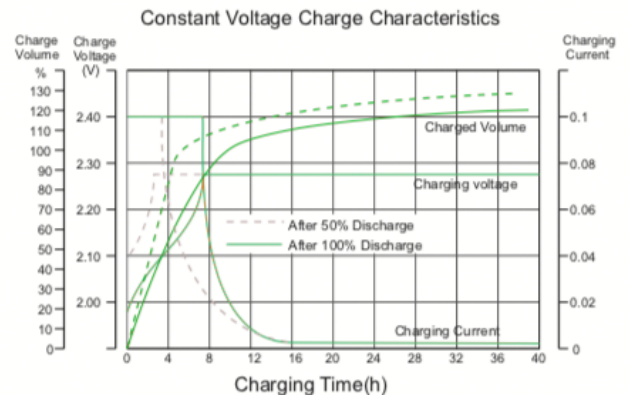
#### Constant Power Discharge (CP, Unit: W/Battery) at 25°C (77°F)

F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	137.4	119.4	100.8	89.4	69.6	55.5	40.8	24.0	17.4
1.67V	128.4	111.6	95.4	84.6	66.6	52.5	39.3	23.1	16.8
1.70V	124.5	108.3	93.3	82.5	65.4	51.0	38.7	22.5	16.5
1.75V	119.1	103.5	89.7	78.6	63.0	50.1	38.1	22.5	16.2
1.80V	113.7	98.7	86.1	74.4	60.6	49.5	37.5	22.5	16.2
1.85V	108.0	93.9	82.8	70.5	58.5	48.6	36.6	22.2	15.9

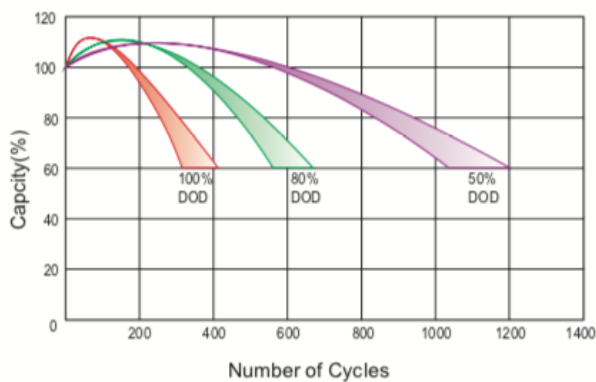
### Discharge Characteristics Curve



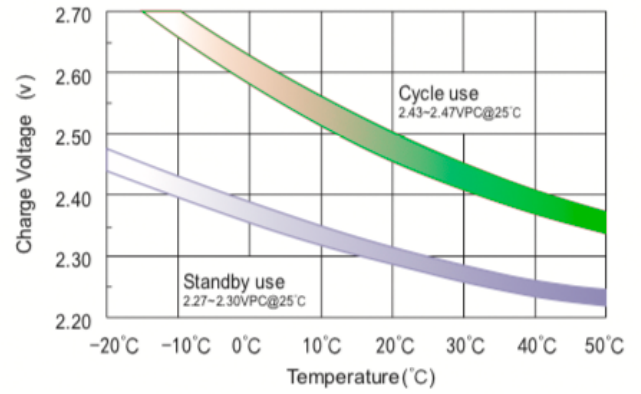
### Charge Characteristic Curve For Standby Use



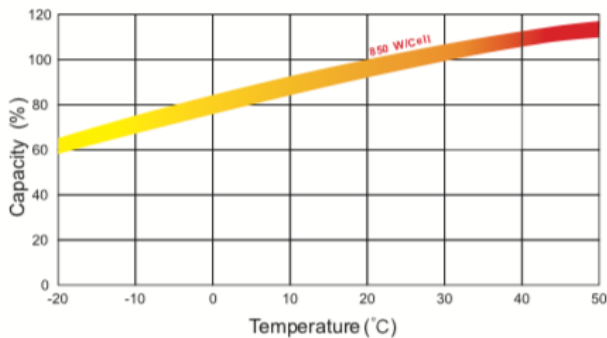
### Cycle Life In Relation To Depth Of Discharge (up to 15')



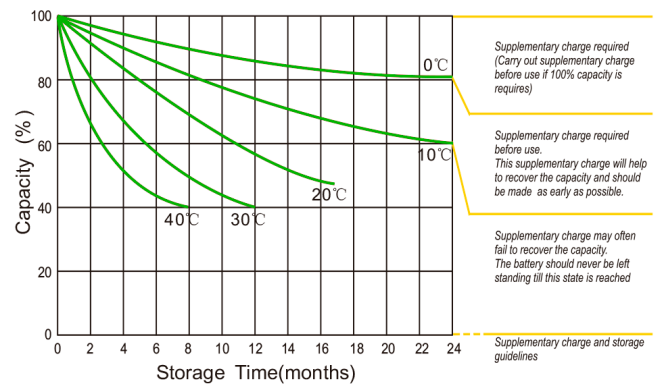
### Relationship Between Charging Voltage And Temperature



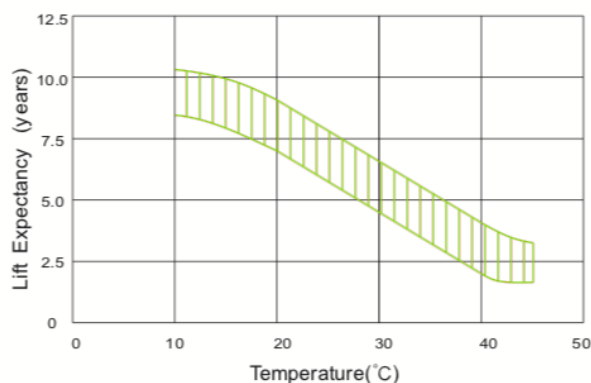
### Temperature Effects On Capacity



### Storage Characteristics



### Effect Of Temperature On Long Term Life



### Life Characteristics Of Standby Use

