LIVEN BATTERY

12V 210W

LVHR12-210W

AGM High Rate Battery

LIVEN LVHR Series

AGM (Absorbent Glass Material) technology with gas recombination. The LVHR series Valve Regulated Lead Acid (VRLA) battery is designed for heavy load discharge applications with 10~12 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 LVHR 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

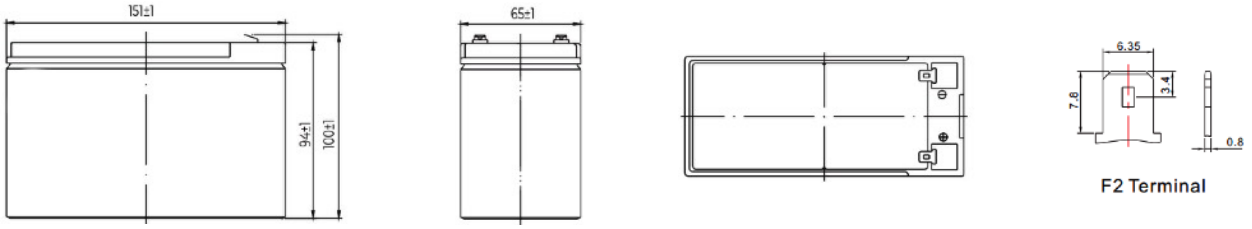
Dimensions:

Length	151±1mm (5.94in)
Width	65±1mm (2.56in)
Height	94±1mm (3.70in)
Total Height	100±1mm (3.90in)

Specifications:

Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	213W @15min-rate to 10.02V per battery @25°C
Weight	Approx. 2.73Kg ±2% (6.02lbs)
Internal Resistance	Approx. 19mΩ
Terminal	F2
Max. Discharge Current	135A (5sec)
Design Life	Up to 10 years in Standby use (25ºC) Eurobat (20ºC): 10~12 years Long Life
Recommended Max. Charging Current	2.8A
Reference Capacity	C20 9.0Ah
Standby Use Voltage	13.6V~13.8V @ 25°C Temperature Compensation: -18mV/°C/Cell
Cycle Use Voltage	14.5V~15.0V @ 25°C Temperature Compensation: -30mV/°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:



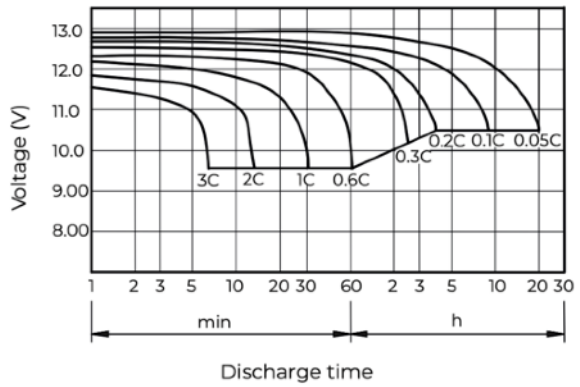
Constant Current Discharge (CC, Unit: A) at 25ºC (77ºF)

F.V./ Time	5min	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h
1.60V	42.5	25.7	18.69	14.80	12.22	7.49	5.92	3.31	2.35	1.89	1.62
1.67V	38.8	24.6	18.06	14.17	11.82	7.25	5.78	3.28	2.33	1.87	1.61
1.70V	35.9	23.9	17.53	13.86	11.60	7.12	5.68	3.26	2.32	1.87	1.60
1.75V	32.7	22.9	17.01	13.44	11.32	6.94	5.57	3.21	2.30	1.85	1.59
1.80V	30.8	21.5	16.06	12.94	10.91	6.68	5.40	3.13	2.23	1.80	1.55

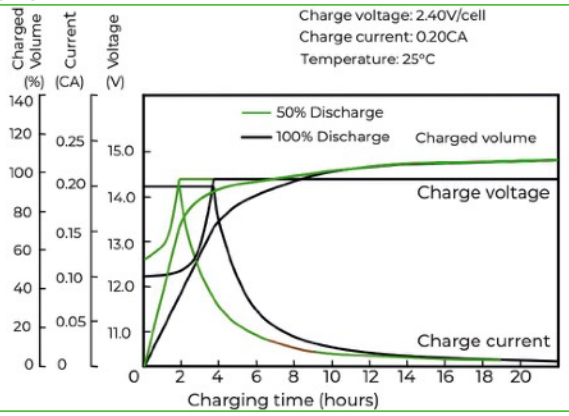
Constant Power Discharge (CP, Unit: W/Battery) at 25ºC (77ºF)

F.V./ Time	5min	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h
1.60V	460.8	287.4	220.8	170.4	122.4	87.0	69.0	39.5	28.3	22.8	19.6
1.67V	435.6	274.2	213.0	163.8	118.2	85.2	67.2	39.1	28.1	22.6	19.4
1.70V	420.0	267.0	207.0	160.2	116.4	84.0	66.0	38.9	28.0	22.5	19.3
1.75V	398.4	255.6	200.4	154.8	113.4	82.2	64.8	38.3	27.8	22.4	19.2
1.80V	364.8	241.8	189.6	146.4	109.2	81.0	63.0	37.3	26.9	21.7	18.7

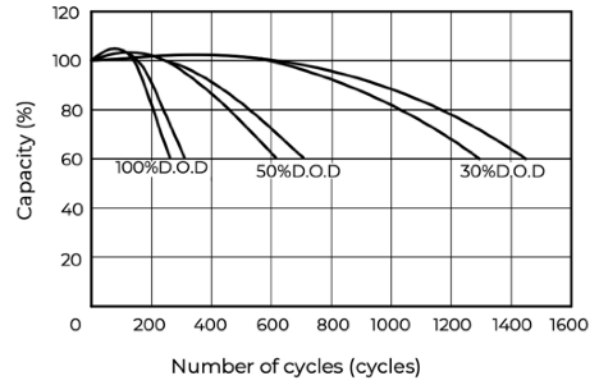
Discharge Characteristics Curve



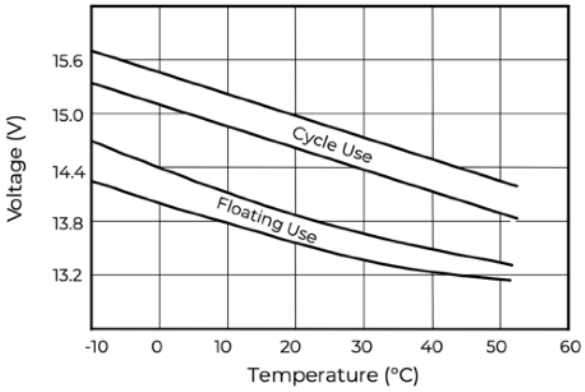
Charging Characteristics



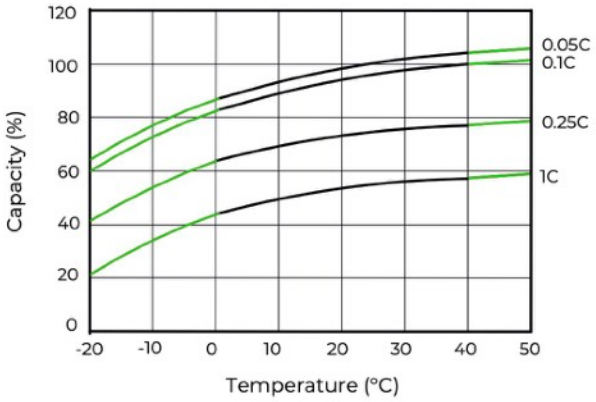
Cycle Life In Relation To Depth Of Discharge



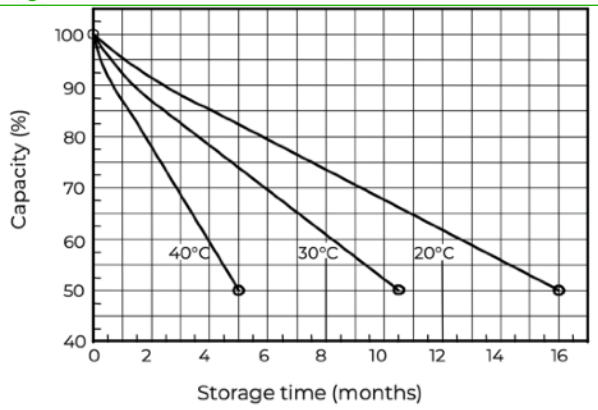
Relationship Between Charging Voltage And Temperature



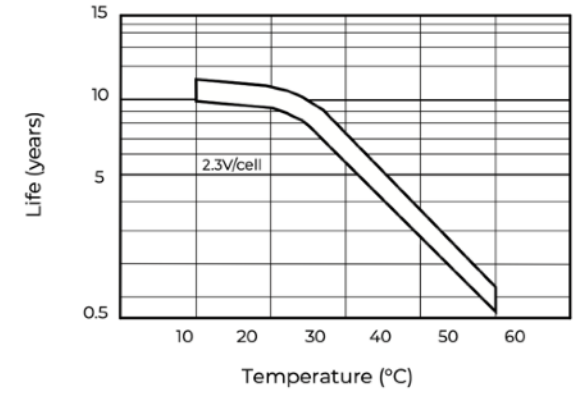
Temperature Effects On Capacity



Storage Characteristics



Effect Of Temperature On Long Term Life



Relationship For OCV And Capacity