LIVEN BATTERY

12V 90Ah

LVJ90-12

GEL Battery

LIVEN LVJ Series

LVJ Hybrid Gel series are manufactured with AGM separator (Absorbent Glass Material) and patented Gel electrolyte. The LVJ series Valve Regulated Lead Acid (VRLA) is Hybrid Gel battery with 12 years floating design life. This battery is ideal for standby or frequent cyclic discharge applications.

The number of deep discharge cycles is increase much compared with normal AGM, 400 cycles at 100% DOD.

Applications:

- Telecommunications
- Uninterrupted Power Supplies
- Medical equipments
- Solar System
- Wind Power System
- Auto Control System

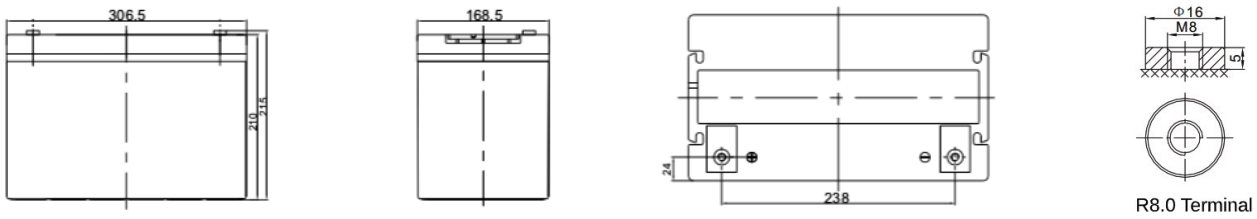
Dimensions:

Length	306±1.5mm (12.1in)
Width	168.5±1.5mm (6.63in)
Height	210±1.5mm (8.27in)
Total Height	215±1.5mm (8.46in)

Specifications:

Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	90Ah @20hour-rate to 1.75V per cell @25°C
Weight	Approx. 28.5Kg ±2% (62.84lbs)
Internal Resistance	Approx. 5.2mΩ
Terminal	R8.0
Max. Discharge Current	900A (5sec)
Design Life	12 years floating Eurobat (20ºC): 10-12 years Long Life
Recommended Max. Charging Current	27.0A
Standby Use Voltage	13.6V~13.8V @ 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: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°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:



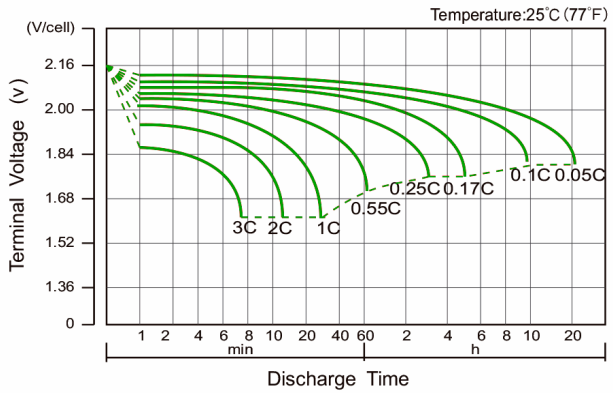
Constant Current Discharge (CC, Unit: A) at 25ºC (77ºF)

F.V. / Time	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	220.5	164.6	94.4	54.5	31.9	23.8	18.8	15.9	10.8	9.18	4.68
1.65V	213.1	159.6	92.4	53.5	31.4	23.4	18.6	15.7	10.7	9.08	4.63
1.70V	203.6	153.2	89.8	52.2	30.7	22.9	18.2	15.4	10.5	8.96	4.58
1.75V	190.7	144.5	86.2	50.3	29.7	22.3	17.8	15.1	10.3	8.79	4.50
1.80V	173.6	132.8	81.4	47.7	28.3	21.3	17.1	14.5	10.0	8.55	4.39
1.85V	150.1	116.6	74.4	44.1	26.4	20.0	16.1	13.8	9.56	8.21	4.23

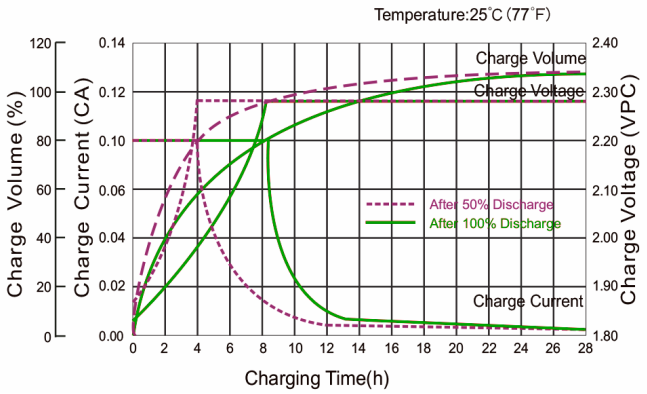
Constant Power Discharge (CP, Unit: W/Battery) at 25ºC (77ºF)

F.V. / Time	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	2250.0	1728.0	1026.0	612.0	363.0	272.4	217.2	183.6	127.2	108.0	55.3
1.65V	2232.0	1710.0	1020.0	606.0	359.4	270.0	214.8	182.4	126.0	107.4	54.8
1.70V	2154.0	1656.0	996.0	594.0	352.8	265.2	211.8	179.4	124.2	106.2	54.2
1.75V	2058.0	1584.0	972.0	576.0	342.6	258.6	207.0	175.8	121.8	103.8	53.3
1.80V	1902.0	1476.0	924.0	548.4	328.8	249.0	199.8	170.4	118.2	101.4	52.1
1.85V	1674.0	1314.0	852.0	510.0	307.8	234.6	189.6	162.6	113.4	97.2	50.3

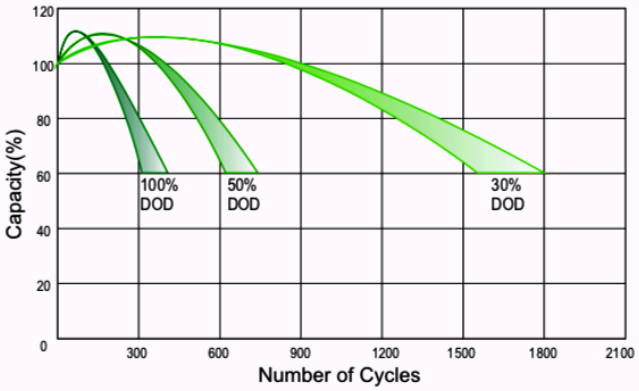
Discharge Characteristics Curve



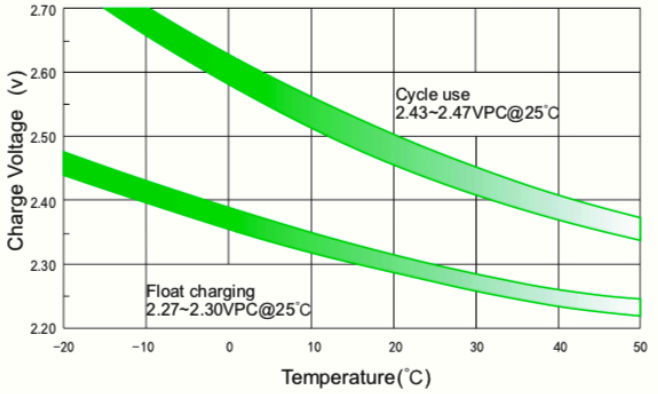
Charge Characteristic Curve For Standby Use



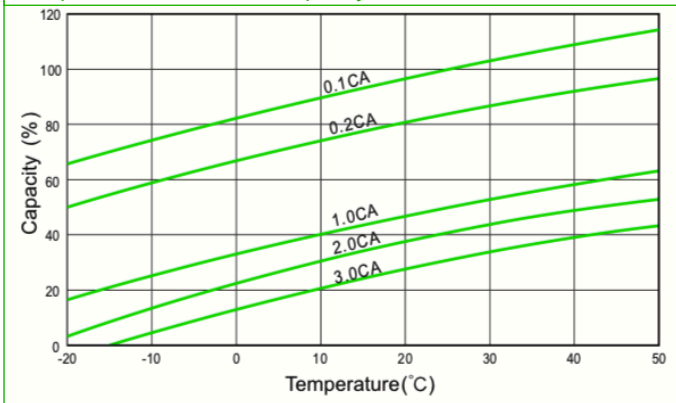
Cycle Life In Relation To Depth Of Discharge



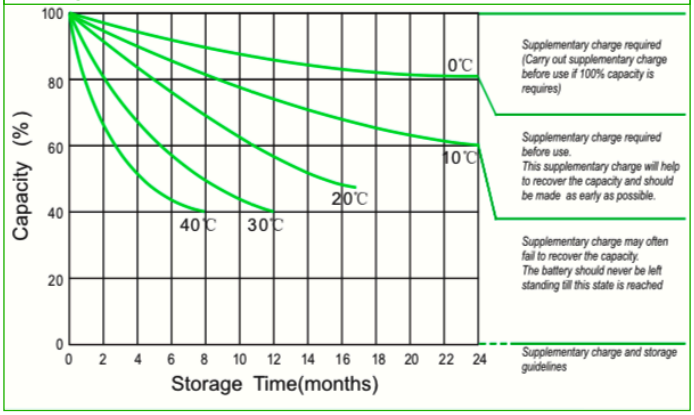
Relationship Between Charging Voltage And Temperature



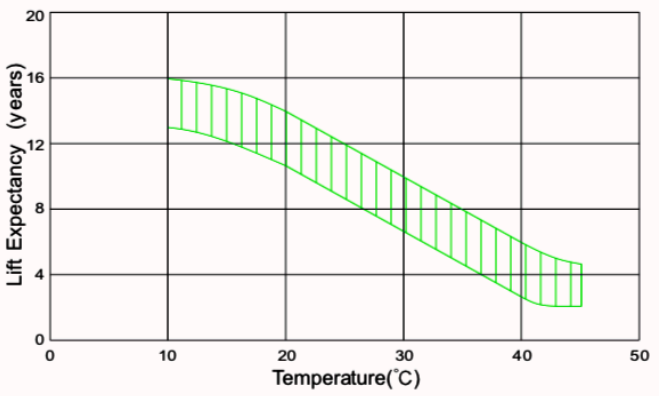
Temperature Effects On Capacity



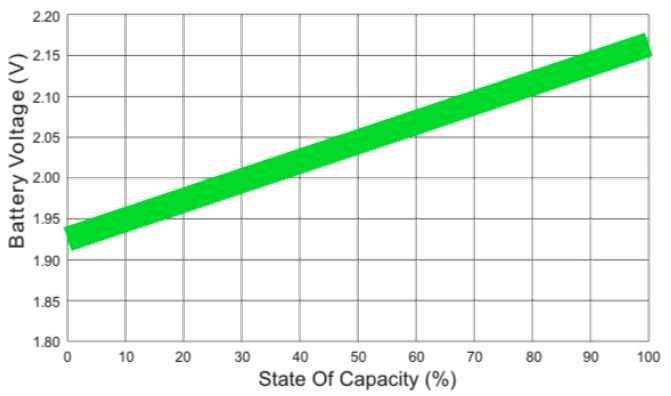
Storage Characteristics



Effect Of Temperature On Long Term Life



Relationship of OCV and State of Charge (20°C)



V03 22/02