



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.

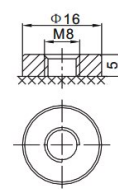
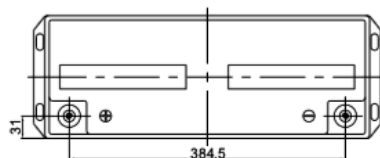
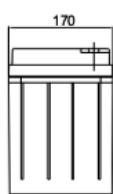
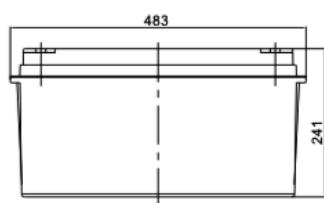
Applications:

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

Dimensions:

Length	483±1.5mm (19.0in)
Width	170±1.5mm (6.69in)
Height	241±1.5mm (9.41in)
Total Height	241±1.5mm (9.41in)

Technical Drawings:



R8.0 Terminal

Specifications:

Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	150Ah @20hour-rate to 1.75V per cell @25°C
Weight	Approx. 44.5Kg ±2% (97.02lbs)
Internal Resistance	Approx. 4.2mΩ
Terminal	R8.0
Max. Discharge Current	1500A (5sec)
Design Life	12 years floating Eurobat (20°C): 10-12 years Long Life
Recommended Max. Charging Current	45.0A
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.

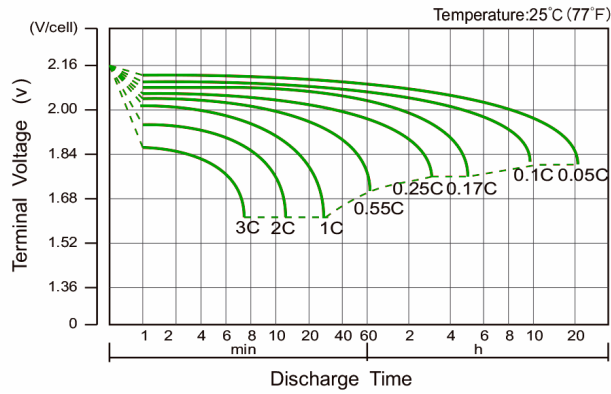
Constant Current Discharge (CC, Unit: A) at 25°C (77°F)

F.V. / Time	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	317.8	244.9	143.5	86.2	52.7	39.7	31.4	26.5	18.1	15.3	7.79
1.65V	307.2	237.6	140.5	84.6	51.8	39.1	31.0	26.1	17.9	15.1	7.72
1.70V	293.4	228.0	136.5	82.5	50.6	38.3	30.4	25.7	17.6	14.9	7.63
1.75V	274.9	215.0	131.1	79.5	49.0	37.2	29.6	25.1	17.2	14.7	7.50
1.80V	250.2	197.6	123.7	75.5	46.7	35.6	28.5	24.2	16.7	14.3	7.32
1.85V	216.4	173.6	113.1	69.7	43.5	33.4	26.9	23.0	15.9	13.7	7.05

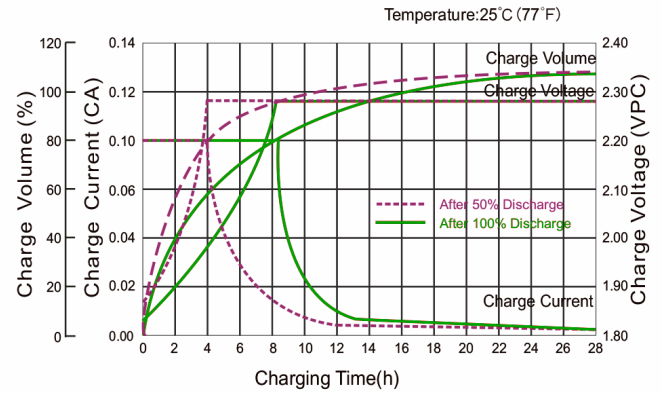
Constant Power Discharge (CP, Unit: W/Battery) at 25°C (77°F)

F.V. / Time	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	3414.0	2706.0	1644.0	1020.0	630.0	478.8	380.4	322.2	222.6	189.6	97.2
1.65V	3384.0	2676.0	1638.0	1008.0	624.0	474.0	377.4	319.8	220.8	188.4	96.0
1.70V	3270.0	2592.0	1596.0	990.0	612.0	465.6	371.4	315.0	217.8	186.0	95.4
1.75V	3120.0	2478.0	1548.0	960.0	595.2	454.2	363.0	308.4	213.6	182.4	93.6
1.80V	2886.0	2310.0	1476.0	912.0	570.6	436.8	350.4	299.4	207.6	177.6	91.2
1.85V	2544.0	2058.0	1368.0	846.0	534.6	411.6	332.4	285.0	198.6	171.0	88.2

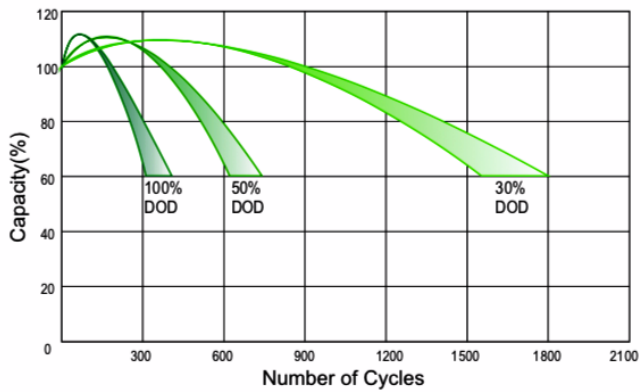
Discharge Characteristics Curve



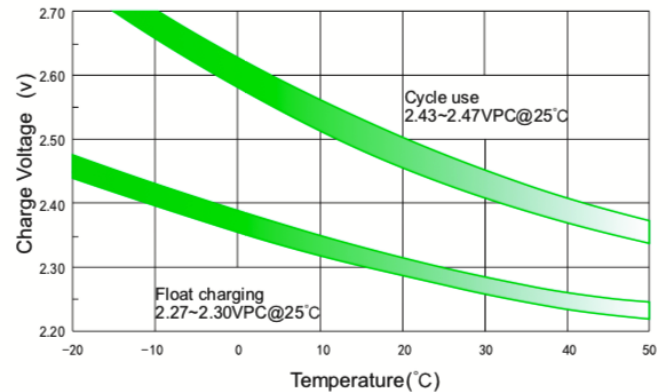
Charge Characteristic Curve For Standby Use



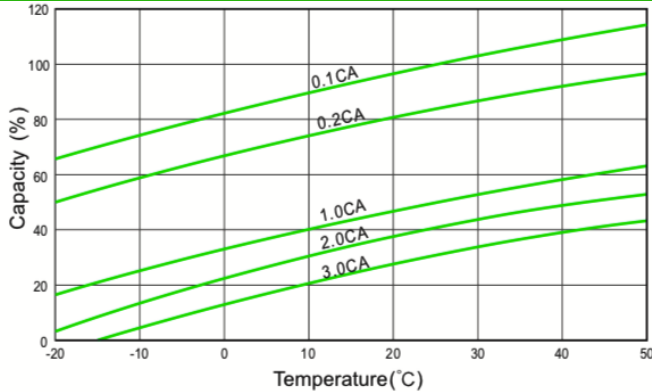
Cycle Life In Relation To Depth Of Discharge



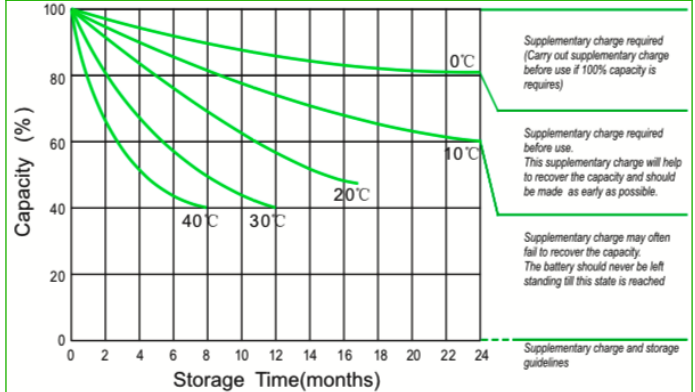
Relationship Between Charging Voltage And Temperature



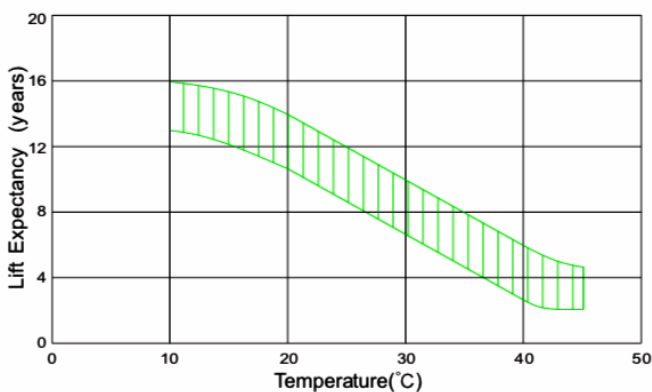
Temperature Effects On Capacity



Storage Characteristics



Effect Of Temperature On Long Term Life



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

