



LIVEN LVG Series

LVG Pure Gel series are manufacturing with high porosity PE separator and patented Gel electrolyte. The LVG series Valve Regulated Lead Acid (VRLA) is Pure Gel with 15 years floating design life. This battery its ideal for standby or frequent cyclic discharge applications under extreme environment. Suitable for Solar and Wind system, Marine, Telecom, UPS.

Deep discharge cycles 1: 450 cycles at 100% DOD.
 Deep discharge cycles 2: 1300 cycles at 50% DOD.

Applications:

- Telecommunications
- UPS
- Medical equipments
- Solar System
- Wind Power System
- Auto Control System
- CATV
- Marine

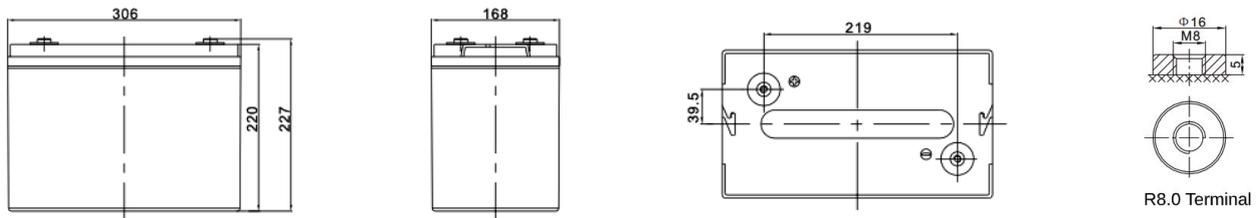
Dimensions:

Length	306±1.5mm (12.0in)
Width	168±1.5mm (6.61in)
Height	220±1.5mm (8.66in)
Total Height	227±1.5mm (8.94in)

Specifications:

Cells Per Unit	3
Voltage Per Unit	6V
Nominal Capacity	180.0Ah @20hour-rate to 1.75V per cell @25°C
Weight	Approx. 25.5Kg ±2% (56.22lbs)
Internal Resistance	Approx. 5.0mΩ
Terminal	R8.0
Max. Discharge Current	1800A (5sec)
Design Life	15 years floating Eurobat (20°C): >12 years Very Long Life
Recommended Maximum Charging Current	36.0A
Standby Use Voltage	6.80V~6.90V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	7.10V~7.20V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -40°C~60°C Charge: -20°C~50°C Storage: -40°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:



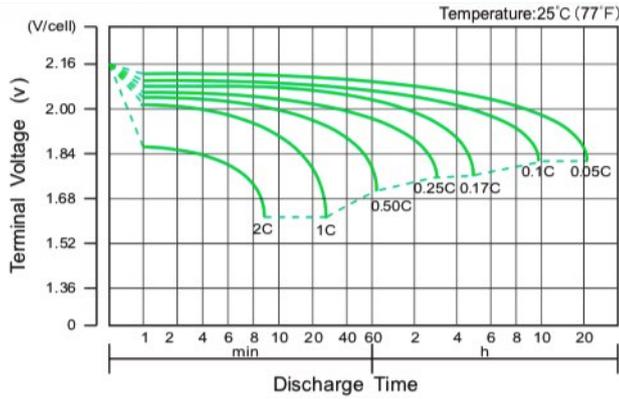
Constant Current Discharge (CC, Unit: A) at 25°C (77°F)

F.V. / Time	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	294.7	239.0	156.8	97.7	59.7	44.8	35.7	30.0	20.3	16.7	9.37
1.65V	278.5	228.5	150.5	94.4	57.8	43.4	34.8	29.2	20.0	16.5	9.22
1.70V	256.4	214.0	143.9	91.3	55.9	42.2	33.8	28.4	19.7	16.3	9.11
1.75V	234.7	199.1	137.5	88.0	54.0	41.0	32.9	27.7	19.5	16.0	9.00
1.80V	212.4	183.9	131.5	84.6	52.0	39.7	32.0	27.0	19.1	15.8	8.91
1.85V	173.6	152.6	113.2	75.9	47.7	36.7	29.7	25.2	17.9	14.9	8.46

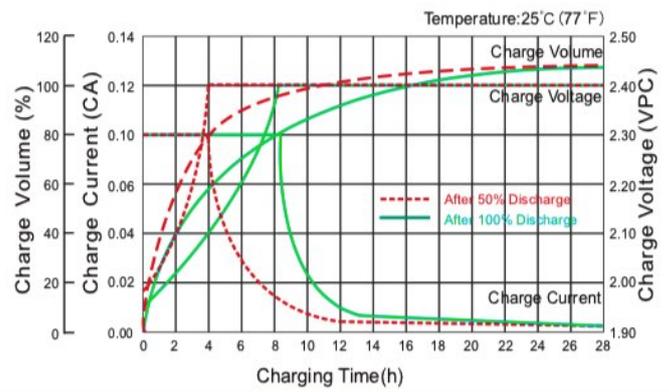
Constant Power Discharge (CP, Unit: W/Battery) at 25°C (77°F)

F.V. / Time	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	1707.6	1424.4	971.1	626.1	385.8	291.6	233.7	197.1	135.0	111.9	63.0
1.65V	1624.8	1368.9	940.2	609.3	375.6	284.4	228.3	192.6	133.5	110.7	62.1
1.70V	1542.0	1313.7	909.3	592.2	365.1	277.2	222.9	188.1	132.0	109.2	61.2
1.75V	1437.0	1240.2	878.1	573.9	354.0	270.0	218.1	184.2	130.2	108.0	60.6
1.80V	1323.6	1161.3	847.8	555.3	342.9	262.8	212.7	180.0	128.4	106.8	60.0
1.85V	1100.7	977.4	737.4	501.0	315.9	243.9	198.3	168.3	120.9	100.5	57.0

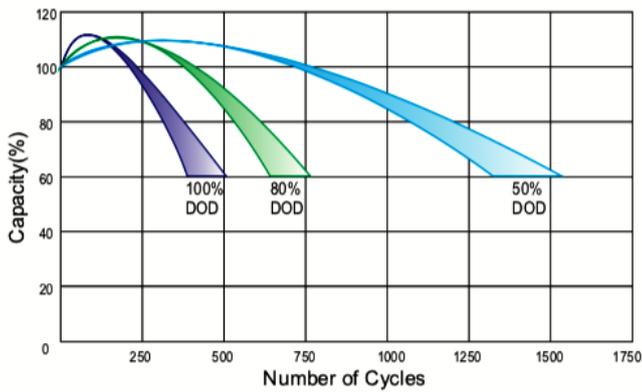
Discharge Characteristics Curve



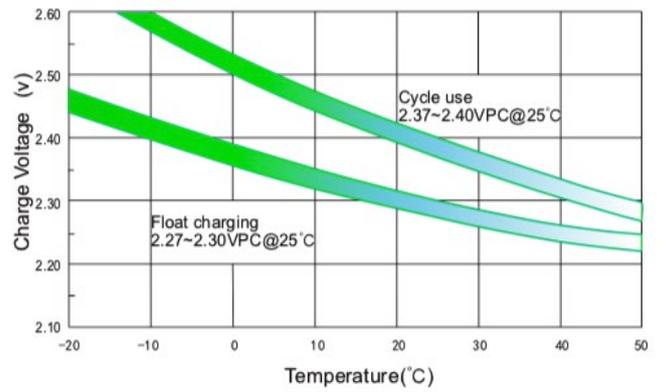
Charge Characteristic Curve For Standby Use



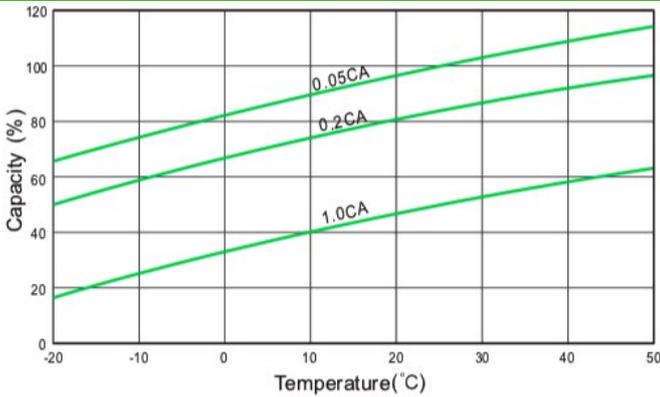
Cycle Life In Relation To Depth Of Discharge



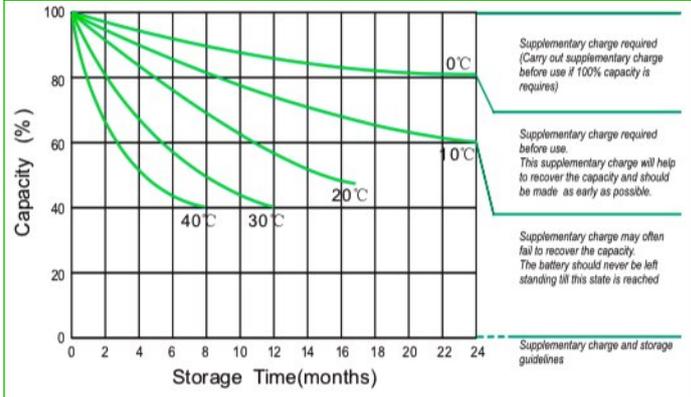
Relationship Between Charging Voltage And Temperature



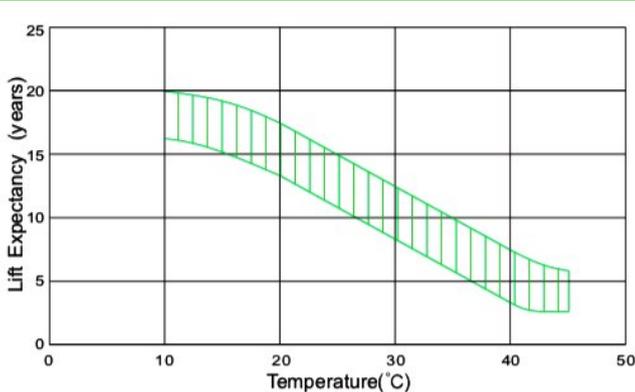
Temperature Effects On Capacity



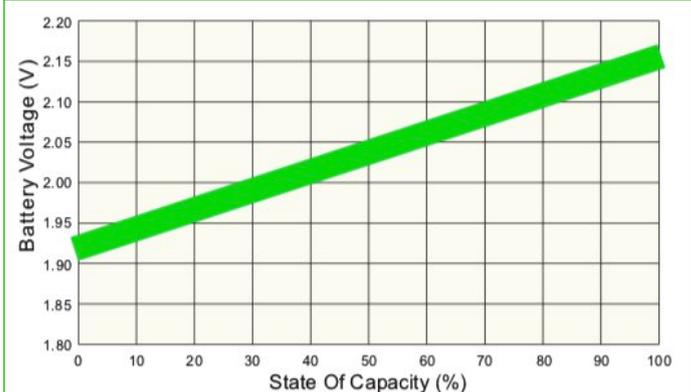
Storage Characteristics



Effect Of Temperature On Long Term Life



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



(Note) All above information shall be changed without prior notice. LIVEN Battery reserves the right to explain and update the latest information.