

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.

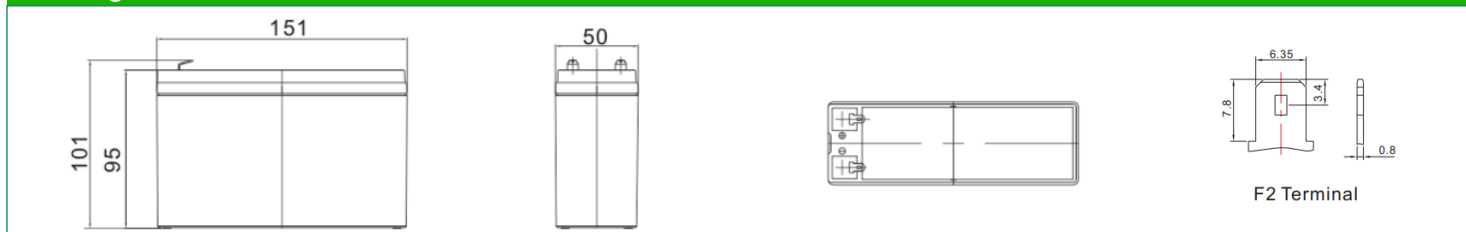
Application:

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

Dimensions:

| | |
|--------------|-------------------------|
| Length | 151±1.5mm (5.94 inches) |
| Width | 50±1.5mm (1.97 inches) |
| Height | 95±1.5mm (3.74 inches) |
| Total Height | 101±1.5mm (3.98 inches) |

Drawing:



Specification:

| | |
|--------------------------------------|---|
| Cells Per Unit | 6 |
| Voltage Per Unit | 12 |
| Nominal Capacity | 21W@15min-rate to 1.67V per cell @25°C |
| Weight | Approx. 1.85 Kg ±2% |
| Internal Resistance | Approx. 25 mΩ |
| Terminal | F1/F2 |
| Max. Discharge Current | 50A (5 sec) |
| Design Life | 8 years floating Eurobat (20°C): 6-9 years General Purpose |
| Recommended Maximum Charging Current | 1.5 A |
| Reference Capacity | C20 6.0AH |
| Standby Use Voltage | 13.7 V~13.9 V @ 25°C Temperature Compensation: -3mV/°C/Cell |
| Cycle Use Voltage | 14.6 V~14.8 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. |



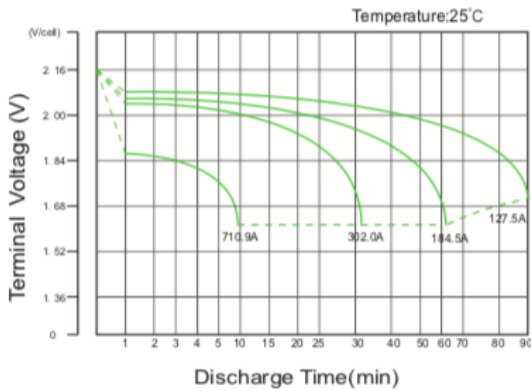
Constant Current Discharge (CC, Unit: A) at 25°C (77°F)

| F.V/Time | 3MIN | 5MIN | 8MIN | 10MIN | 15MIN | 20MIN | 30MIN | 60MIN | 90MIN |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V | 24.13 | 20.98 | 17.45 | 15.39 | 11.90 | 9.631 | 7.051 | 4.112 | 2.997 |
| 1.67V | 22.33 | 19.42 | 16.37 | 14.44 | 11.28 | 8.984 | 6.722 | 3.919 | 2.853 |
| 1.70V | 21.40 | 18.61 | 15.79 | 13.92 | 10.93 | 8.641 | 6.532 | 3.806 | 2.767 |
| 1.75V | 20.21 | 17.58 | 15.00 | 13.07 | 10.42 | 8.405 | 6.348 | 3.743 | 2.705 |
| 1.80V | 19.01 | 16.53 | 14.21 | 12.22 | 9.897 | 8.156 | 6.153 | 3.669 | 2.640 |
| 1.85V | 17.74 | 15.43 | 13.36 | 11.33 | 9.334 | 7.871 | 5.926 | 3.582 | 2.561 |

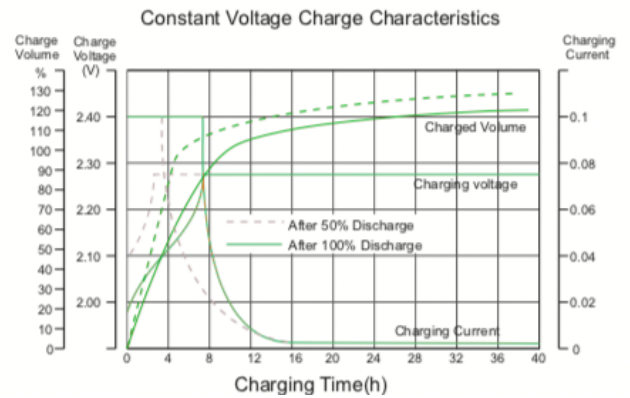
Constant Power Discharge (CP, Unit: W/Battery) at 25°C (77°F)

| F.V/Time | 3MIN | 5MIN | 8MIN | 10MIN | 15MIN | 20MIN | 30MIN | 60MIN | 90MIN |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1.60V | 262.2 | 228.0 | 192.6 | 171.0 | 132.6 | 106.2 | 78.0 | 45.6 | 33.4 |
| 1.67V | 244.8 | 213.0 | 182.4 | 162.0 | 127.2 | 100.2 | 75.0 | 43.9 | 32.1 |
| 1.70V | 237.6 | 206.4 | 177.6 | 157.8 | 124.8 | 97.2 | 73.8 | 43.1 | 31.5 |
| 1.75V | 227.4 | 197.4 | 171.0 | 150.0 | 120.0 | 96.0 | 72.6 | 43.0 | 31.2 |
| 1.80V | 216.6 | 188.4 | 164.4 | 142.2 | 115.8 | 94.2 | 71.4 | 42.7 | 30.8 |
| 1.85V | 206.4 | 179.4 | 157.8 | 134.4 | 111.6 | 93.0 | 70.2 | 42.5 | 30.5 |

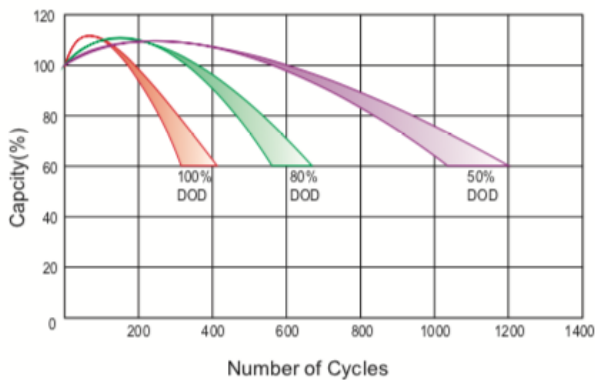
Discharge Characteristics Curve



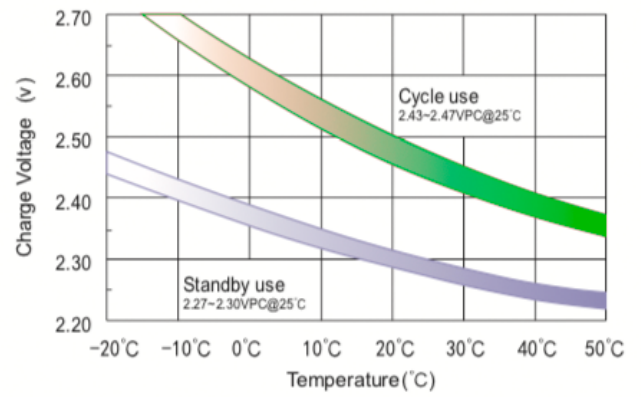
Charge Characteristic Curve For Standby Use



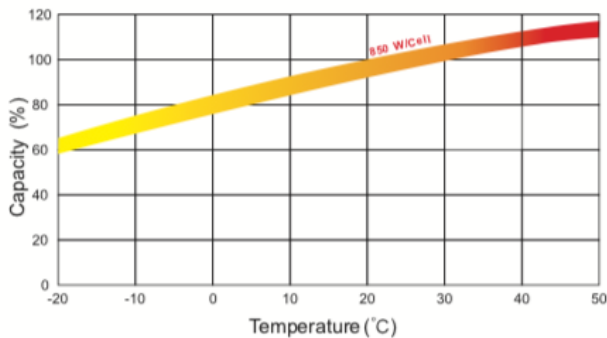
Cycle Life In Relation To Depth Of Discharge (up to 15')



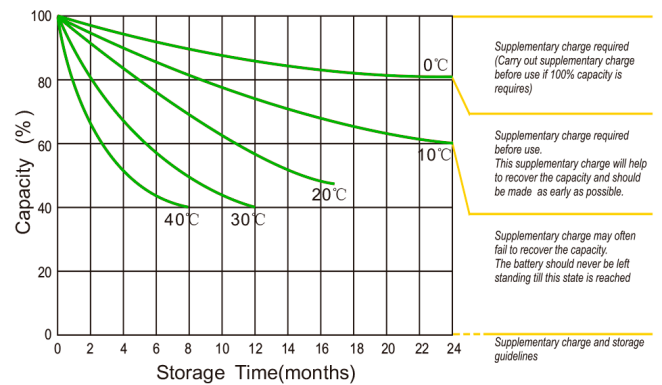
Relationship Between Charging Voltage And Temperature



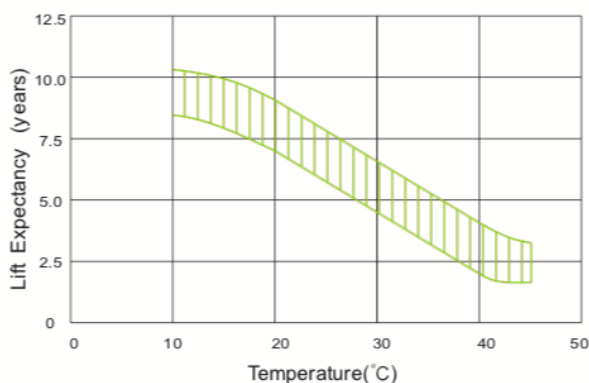
Temperature Effects On Capacity



Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use

