



LIVEN LV Series

AGM (Absorbent Glass Material) technology with gas recombination. VRLA (Valve Regulated Lead Acid Battery). Maintenance-Free Sealed Lead Acid Battery. Battery with 5 years design life in float service.

Cycle use 1: Up to 260 cycles at 100% DOD.
Cycle use 2: Up to 500 cycles at 50% DOD.

Applications:

- Telecommunications
- Uninterrupted Power Supplies
- Medical equipments
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply

Dimensions:

Length	70±1.5mm (2.76in)
Width	47±1.5mm (1.85in)
Height	99±1.5mm (3.90in)
Total Height	105±1.5mm (4.13in)

Specifications:

Cells Per Unit	3
Voltage Per Unit	6V
Nominal Capacity	4.5Ah @20hour-rate to 1.75V per cell @25°C
Weight	Approx. 0.72Kg ±2% (1.59lbs)
Internal Resistance	Approx. 23mΩ
Terminal	F1
Max. Discharge Current	45A (5sec)
Short Circuit Current	234A
Design Life	5 years (Float charging) Eurobat (20°C): 3-5 years
Recommended Maximum Charging Current	1.35A
Standby Use Voltage	6.75V~6.90V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	7.20V~7.50V @ 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

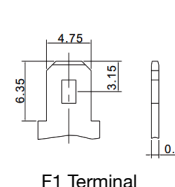
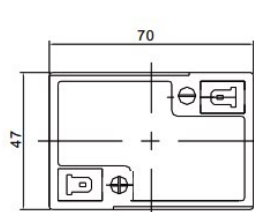
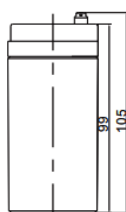
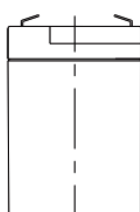
Self Discharge

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.

Technical Drawings:



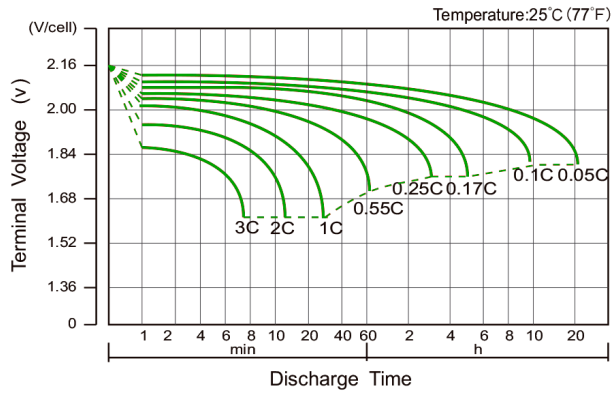
Constant Current Discharge (CC, Unit: A) at 25°C (77°F)

F.V./ Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	17.84	11.64	8.584	4.968	2.870	1.694	1.231	0.980	0.828	0.553	0.450	0.234
1.65V	17.20	11.29	8.359	4.859	2.817	1.669	1.215	0.968	0.818	0.547	0.446	0.232
1.70V	16.36	10.83	8.063	4.714	2.747	1.636	1.193	0.952	0.805	0.540	0.440	0.230
1.75V	15.28	10.25	7.678	4.526	2.654	1.592	1.164	0.930	0.788	0.530	0.433	0.227
1.80V	13.92	9.494	7.183	4.281	2.533	1.535	1.126	0.902	0.766	0.517	0.423	0.222
1.85V	12.25	8.553	6.558	3.968	2.378	1.460	1.076	0.865	0.737	0.500	0.409	0.216

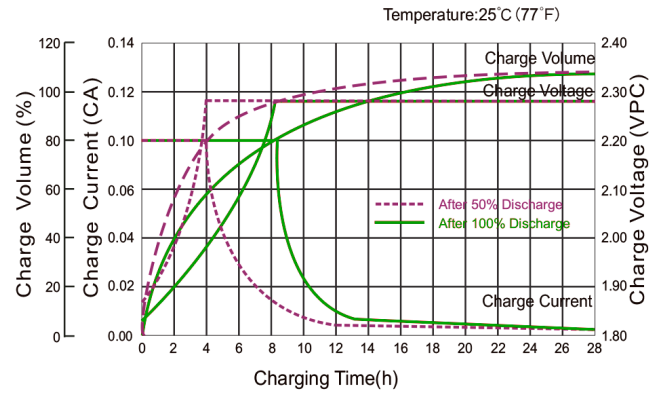
Constant Power Discharge (CP, Unit: W/Battery) at 25°C (77°F)

F.V./ Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	92.13	60.24	45.69	27.48	16.35	9.78	7.17	5.73	4.86	3.30	2.70	1.41
1.65V	91.17	59.97	45.42	27.27	16.20	9.69	7.11	5.70	4.83	3.27	2.67	1.41
1.70V	87.69	58.20	44.22	26.61	15.87	9.54	6.99	5.61	4.77	3.24	2.64	1.38
1.75V	83.37	56.04	42.72	25.80	15.39	9.33	6.87	5.49	4.68	3.18	2.61	1.35
1.80V	77.28	52.83	40.53	24.66	14.76	9.03	6.66	5.34	4.56	3.09	2.55	1.35
1.85V	69.24	48.45	37.53	23.10	13.95	8.64	6.39	5.16	4.41	3.00	2.46	1.32

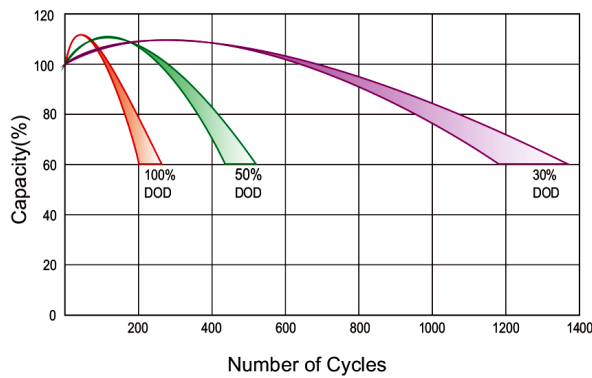
Discharge Characteristics Curve



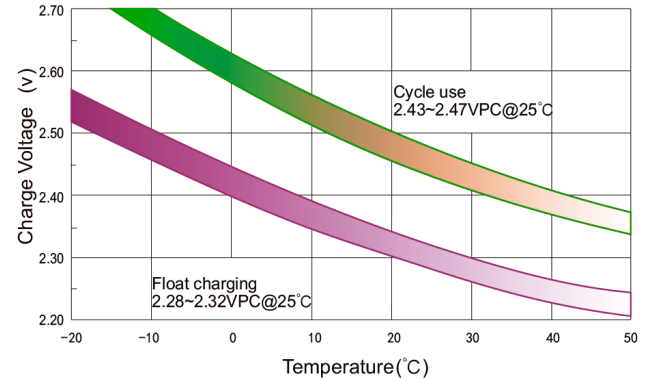
Charge Characteristic Curve For Standby Use



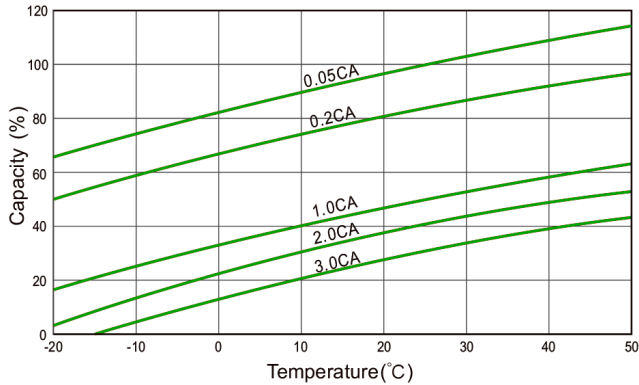
Cycle Life In Relation To Depth Of Discharge



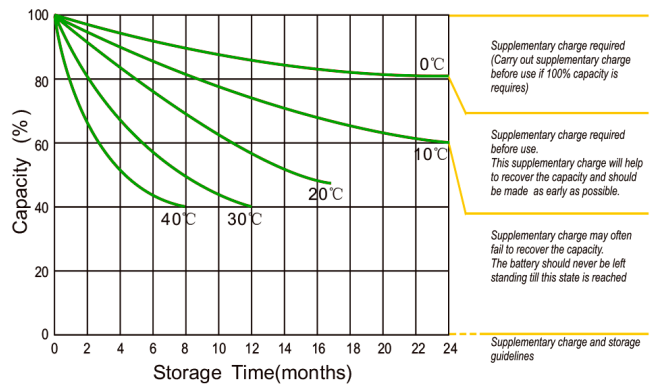
Relationship Between Charging Voltage And Temperature



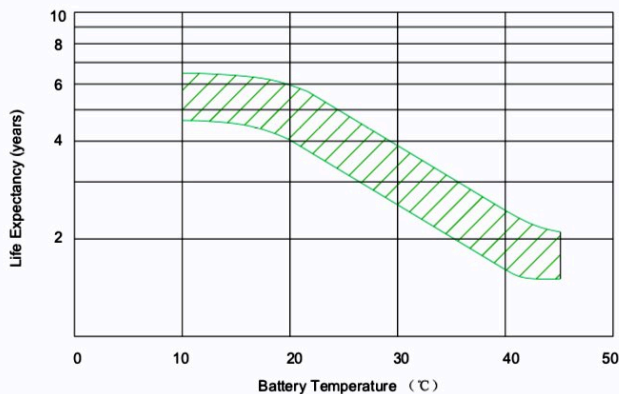
Temperature Effects On Capacity



Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use

