NIMAC
Power into the Future

VRLA BATTERY | 6-GFM-40J | 12V40 Ah

SLA BATTERY—GEL TECHNOLOGY SERIES

Specification

Nominal Voltage	12V
Number of cell	6
Nominal Capacity	40Ah@10hr-rate (4.0A to 1.80V/cell @25℃)
Weight	Approx.12.0Kg
Terminal	M6,Φ=14
Container Material	ABS (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.
Rated Capacity	41.1Ah 20hr-rate (2.06A to 1.80V/cell @25℃) 40.3Ah 10hr-rate (4.03A to 1.80V/cell @25℃) 33.5Ah 5hr-rate (6.70A to 1.75V/cell @25℃) 24.5Ah 1hr-rate (24.5A to 1.60V/cell @25℃)
Max. Discharge Current	400A(5sec)
Internal Resistance	Approx.9.0mΩ(Fully charged)
Operating Temp. Range	Discharge: -40 ℃~60℃ Charge : -20℃~50℃ Storage : -40℃~60℃
Cycle Use	Charging Current: ≤12.0A Voltage:14.2V ~14.4V Temperature compensation:-30mV/℃
Standby Use	Charging Current:No limit Voltage:13.6V ~13.8V Temperature compensation:-20mV/℃
Self-Discharge	less than 1% at 25℃
Design Life	15 years (floating charge)

Introduction

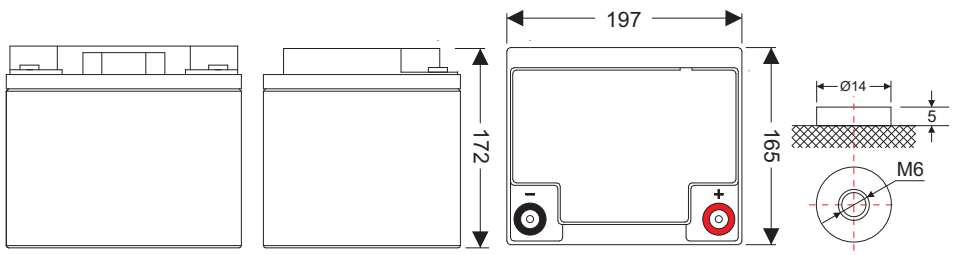
The NIMAC GEL-TECH batteries designed with 15+ years service life. The SOLID-GEL system can avoid corrosion and stratification. The special separator can properly prevent short-circuit. It can offer high deep discharge ability, super thermal stability, good recovery-ability after deep discharging. The deep discharge cycles of GEL-TECH batteries can be more than 30% compared with other normal AGM batteries.

Applications

- *Auto control system &ATM machine*
- *Electronic apparatus and equipment*
- *Emergency light & Emergency backup power supply & Alarm/Security system*
- *Power generation system (solar and wind power system,etc.)*
- *Communication power & DC power*
- *Electric Power System(EPS)*
- *Uninterruptable Power System (UPS)*
- ……

Dimensions

Length	197±1mm (7.76 inches)
Width	165±1mm (6.50 inches)
Heigth	170±1mm (6.69 inches)
Total Heigth	170±1mm (6.69 inches)



Unit: mm

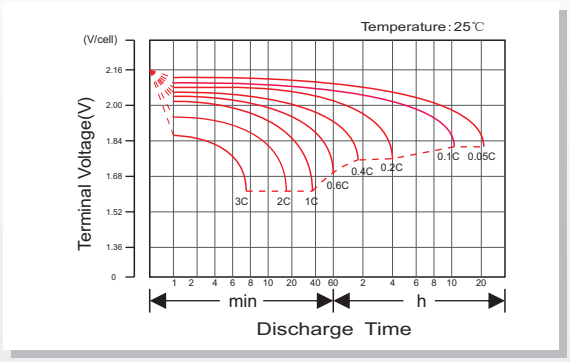
Constant Current Discharge Characteristics: A (25℃)

F. V/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V/cell	132.5	94.9	69.1	43.35	24.50	13.99	9.84	8.14	6.86	4.868	4.192	2.217
1.65V/cell	128.9	90.3	67.6	42.64	24.39	13.88	9.80	8.11	6.82	4.829	4.152	2.177
1.70V/cell	121.5	87.1	66.6	42.26	24.17	13.78	9.73	8.07	6.78	4.789	4.112	2.137
1.75V/cell	109.1	80.4	63.4	41.21	23.94	13.67	9.69	7.99	6.70	4.749	4.072	2.096
1.80V/cell	98.5	73.3	58.44	39.40	23.37	13.43	9.42	7.80	6.58	4.670	4.031	2.056
1.85V/cell	85.7	65.5	52.42	36.91	22.20	12.83	9.01	7.43	6.29	4.472	3.910	1.935

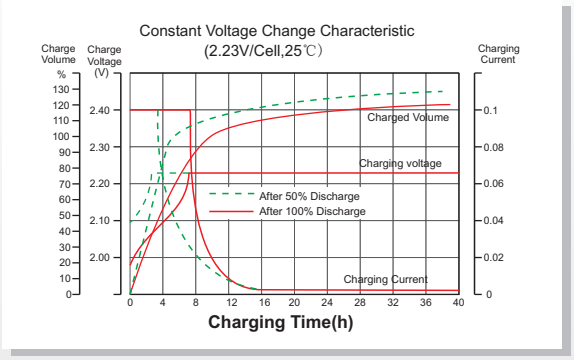
Constant Power Discharge Characteristics: W (25 ℃)

F. V/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V/cell	1380	1009	743	489.3	280.3	160.9	113.5	94.1	79.4	56.49	47.14	24.90
1.65V/cell	1352	964	728	483.2	278.9	160.3	113.3	93.9	78.9	56.25	46.66	24.66
1.70V/cell	1276	932	718	477.5	276.9	158.8	112.6	93.4	78.7	55.78	46.42	24.42
1.75V/cell	1149	861	684	466.6	274.1	157.4	112.0	92.7	77.9	55.30	45.93	24.18
1.80V/cell	1034	782	629	445.4	267.4	155.0	109.3	90.3	76.7	54.12	45.45	23.93
1.85V/cell	892	694	561.6	417.3	253.3	147.9	103.8	86.0	72.9	52.22	44.00	22.97

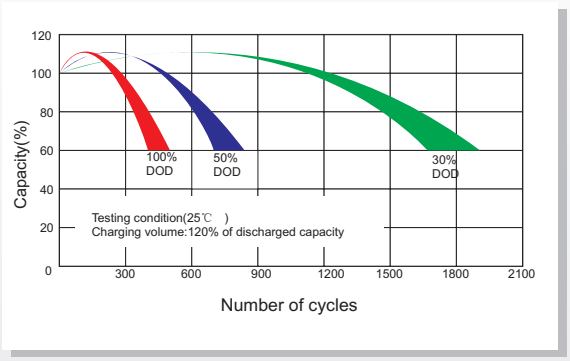
Discharge Characteristics Curve



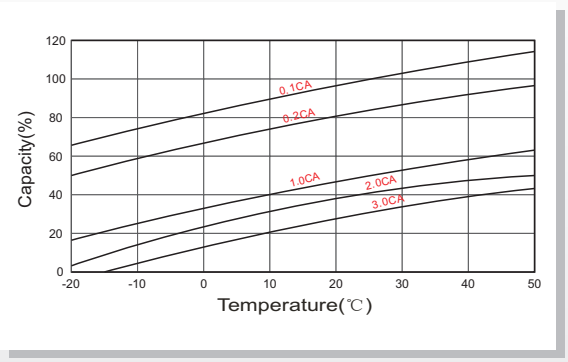
Charging Characteristics Curve



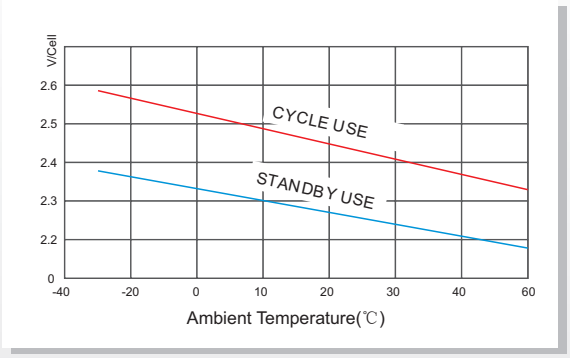
Cycle life in relation to depth of Discharge



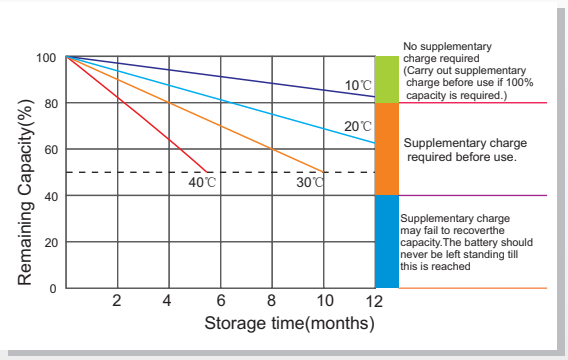
Temperature effects on Capacity



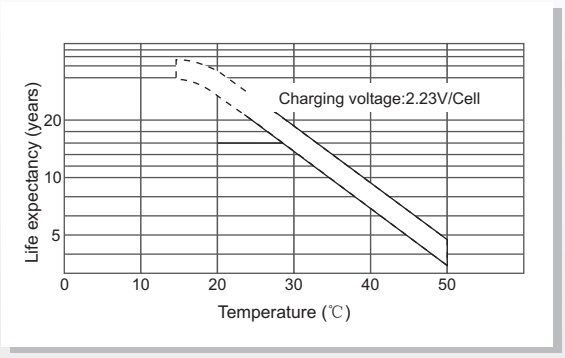
Relationship between charging voltage and temperature



Self-discharge Characteristics



Temperature effects on Float life



Life Characteristics of Standby use