MOTOMA®
Power into the Future

VRLA BATTERY | MS12V12 | 12V12Ah

SLA BATTERY—STANDARD SERIES

Specification

Nominal Voltage	12V
Number of cell	6
Nominal Capacity	12Ah@20hr-rate (0.6A to 1.80V/cell @25℃)
Weight	Approx.3.6Kg
Terminal	F2
Container Material	ABS (UL94-HB), Flammability resistance of UL94-V1 can be available upon request.
Rated Capacity	12.0Ah 20hr-rate (0.6A to 1.80V/cell @25℃) 11.6Ah 10hr-rate (1.16A to 1.80V/cell @25℃) 10.5Ah 5hr-rate (2.1A to 1.75V/cell @25℃) 8.5Ah 1hr-rate (8.5A to 1.60V/cell @25℃)
Max. Discharge Current	180A(5sec)
Internal Resistance	Approx.16mΩ(Fully charged)
Operating Temp. Range	Discharge: -20℃~50℃ Charge : -10℃~50℃ Storage : -20℃~40℃
Cycle Use	Charging Current:≤3.6A Voltage:14.6V~14.8V Temperature compensation:-30mV/℃
Standby Use	Charging Current:No limit Voltage:13.6V~13.8V Temperature compensation:-20mV/℃
Self-Discharge	less than 3% at 25℃
Design Life	6 years (floating charge)

Introduction

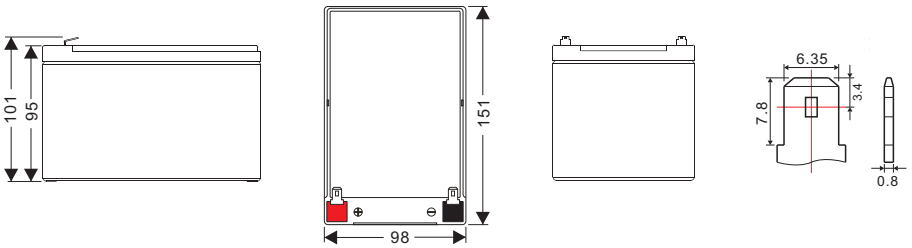
The MOTOMA standard series batteries designed with 6 years or more service life for general purpose, which designed with advanced technology, super heavy duty grid, high performance plates and electrolyte.The standard series batteries have long and reliable standby life and high consistency for better performance in series usage.

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	151±1mm (5.94 inches)
Width	98±1mm (3.85 inches)
Heigth	95±1mm (3.74 inches)
Total Heigth	101±1mm (3.97 inches)



Unit: mm

Constant Current Discharge Characteristics: A (25℃)

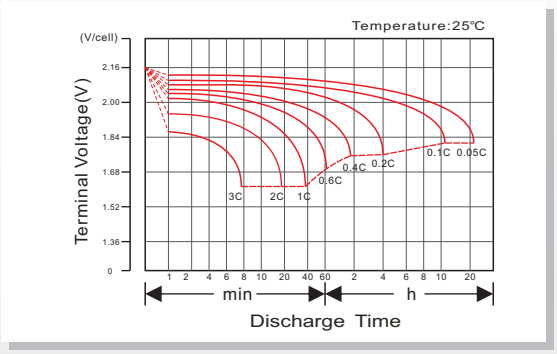
F. V/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V/cell	48.59	32.47	24.97	14.43	8.536	4.449	3.149	2.583	2.141	1.420	1.230	0.690
1.65V/cell	46.83	31.21	24.17	14.21	8.487	4.417	3.137	2.571	2.128	1.415	1.217	0.665
1.70V/cell	44.30	30.24	23.61	14.10	8.426	4.407	3.124	2.558	2.116	1.409	1.204	0.652
1.75V/cell	40.02	28.30	22.38	13.78	8.303	4.353	3.112	2.546	2.103	1.403	1.192	0.627
1.80V/cell	35.74	26.37	21.14	13.44	8.180	4.278	3.087	2.534	2.090	1.398	1.167	0.602
1.85V/cell	31.50	24.43	19.91	13.11	8.069	4.214	3.063	2.522	2.078	1.392	1.154	0.590

Constant Power Discharge Characteristics: W (25℃)

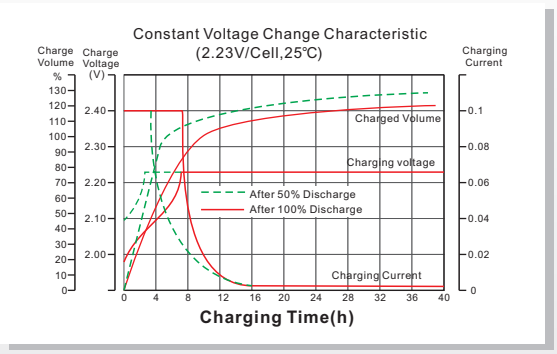
F. V/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V/cell	531.4	345.4	280.7	173.1	102.36	53.33	37.71	30.85	30.18	17.08	14.53	8.125
1.65V/cell	517.5	345.0	276.6	170.3	102.07	53.01	37.64	30.77	29.95	16.94	14.39	7.826
1.70V/cell	507.2	334.7	270.3	169.2	101.84	52.88	37.56	30.77	29.87	16.92	14.24	7.677
1.75V/cell	458.3	320.9	256.2	165.2	100.15	52.05	37.34	30.55	29.80	16.87	14.09	7.379
1.80V/cell	409.4	300.2	242.1	161.3	98.45	51.34	37.05	30.33	29.72	16.80	13.86	7.156
1.85V/cell	360.5	279.5	228.0	157.3	96.75	50.57	36.75	30.11	29.65	16.80	13.64	6.932

MOTOMA POWER CO.,LTD
Http: / /www.motoma.com
E-mail:info@motoma.com

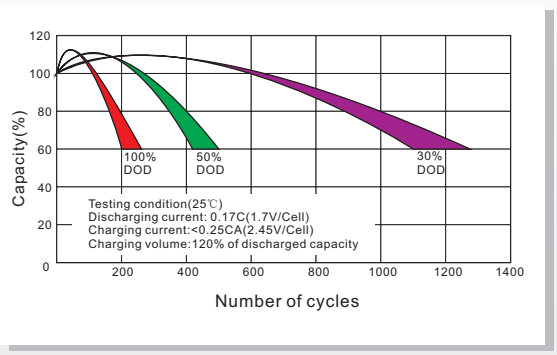
Discharge Characteristics Curve



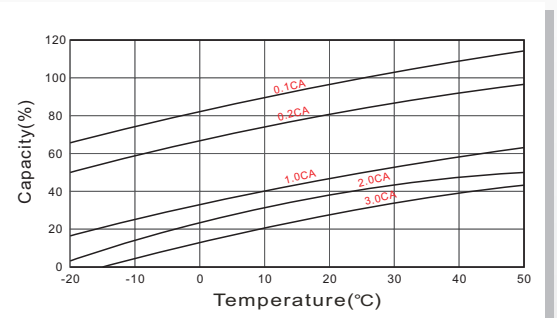
Charging Characteristics Curve



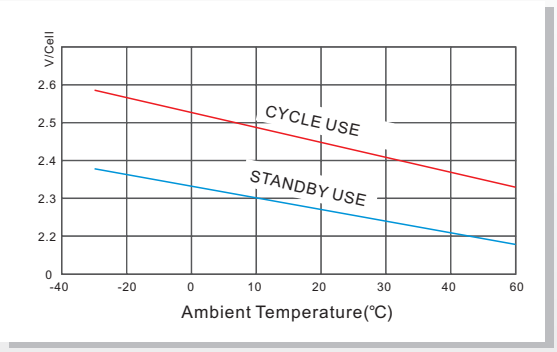
Cycle life in relation to depth of Discharge



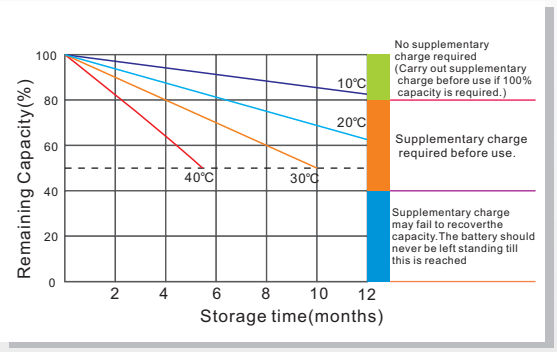
Temperature effects on Capacity



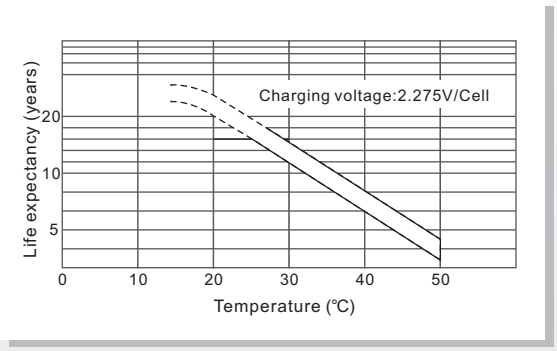
Relationship between charging voltage and temperature



Self-discharge Characteristics



Temperature effects on Float life



Life Characteristics of Standby use