

# SIN12-9H [12V 9,0AH]

## Specification

Cells Per Unit	6
Voltage Per Unit	12
Nominal Capacity	9Ah@20hour-rate to 1.75V per cell @25°C
Weight	Approx. 2.60 Kg (Tolerance ±5.0%)
Internal Resistance	Approx. 21 mΩ
Terminal	F2
Max. Discharge Current	90A (5 sec)
Short Circuit Current	430A
Design Life	6~8 years (Float charging)
Max. Charging Current	2.7 A
Reference Capacity	C3 6.96AH C5 7.85AH C10 8.41AH C20 9.00AH
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: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C ±5°C
Self Discharge	SINERGY 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.



SIN series is a general purpose battery with 6~8 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the SIN series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EP5, medical equipment, emergency light and security system applications.



ISO 9001



ISO 14001



OHSAS 18001

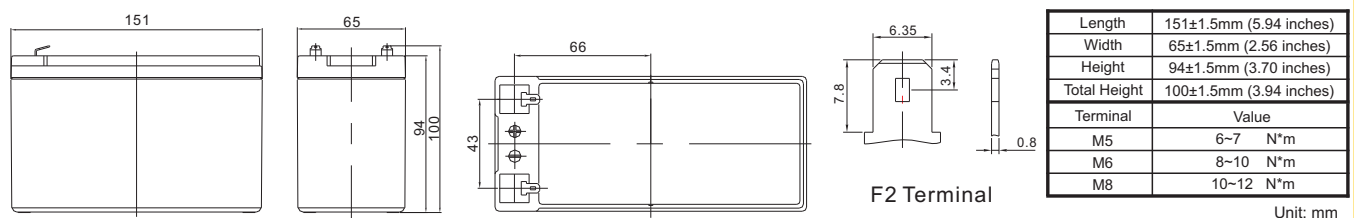


MH 28539



G4M20206-0910-E-16

## Dimensions



### Constant Current Discharge Characteristics : A (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	34.15	24.13	17.45	10.020	5.499	3.376	2.538	2.049	1.698	1.093	0.887	0.469
1.65V	31.75	22.80	16.68	9.619	5.310	3.268	2.460	1.994	1.654	1.080	0.877	0.461
1.70V	28.65	20.99	15.62	9.195	5.137	3.161	2.393	1.939	1.611	1.064	0.863	0.456
1.75V	25.67	19.22	14.54	8.788	4.950	3.050	2.321	1.890	1.570	1.049	0.852	0.450
1.80V	22.54	17.40	13.42	8.400	4.760	2.941	2.250	1.835	1.530	1.031	0.841	0.446
1.85V	17.89	14.22	11.14	7.234	4.270	2.695	2.080	1.706	1.426	0.968	0.792	0.423

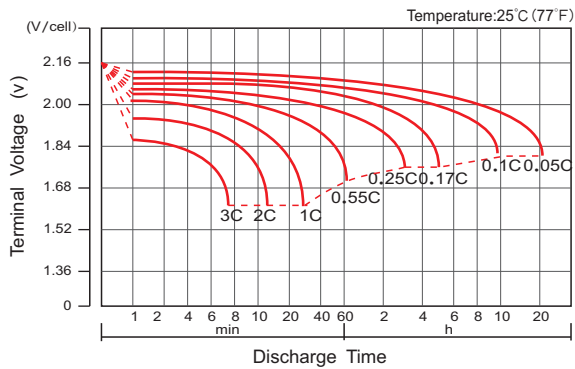
### Constant Power Discharge Characteristics : WPC (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	56.61	41.02	30.50	18.20	10.33	6.399	4.848	3.934	3.273	2.134	1.744	0.923
1.65V	53.25	39.51	29.59	17.66	10.04	6.225	4.718	3.842	3.200	2.114	1.726	0.909
1.70V	49.14	37.04	28.13	17.04	9.770	6.053	4.610	3.751	3.127	2.087	1.702	0.899
1.75V	45.00	34.52	26.56	16.46	9.470	5.868	4.491	3.669	3.059	2.062	1.681	0.890
1.80V	40.35	31.79	24.87	15.89	9.161	5.687	4.369	3.577	2.991	2.031	1.662	0.882
1.85V	32.71	26.44	20.93	13.82	8.267	5.239	4.057	3.337	2.798	1.911	1.567	0.838

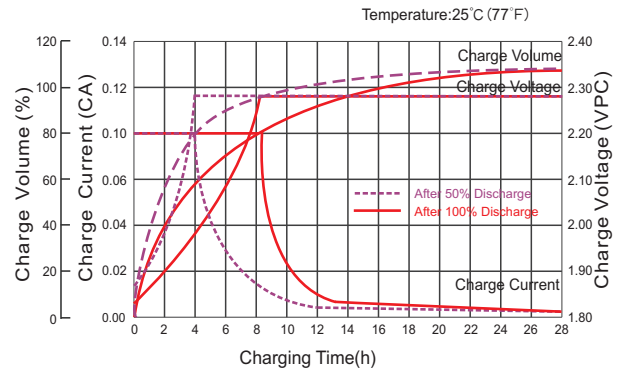
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values. The battery must be fully charged before the capacity test. The C<sub>20</sub> should reach 95% after the first cycle and 100% after the third cycle.

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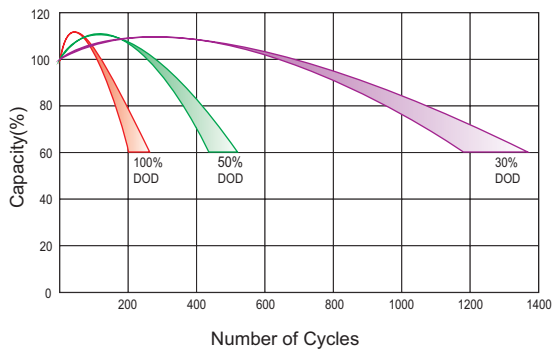
## Discharge Characteristics Curve



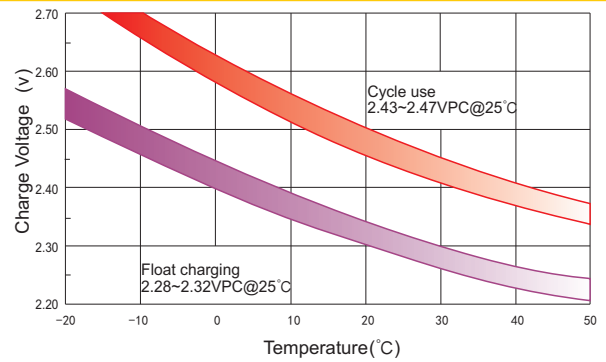
## Charge Characteristic Curve For Standby Use



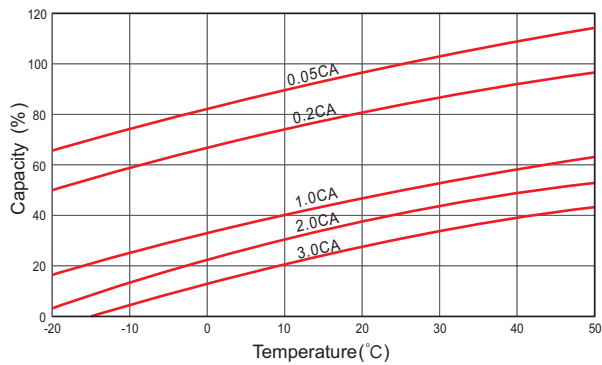
## Cycle Life In Relation To Depth Of Discharge



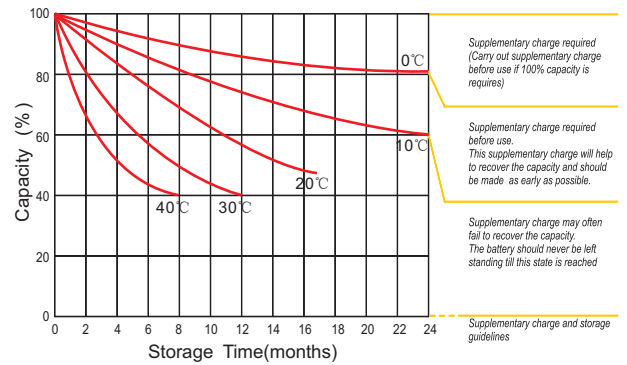
## Relationship Between Charging Voltage And Temperature



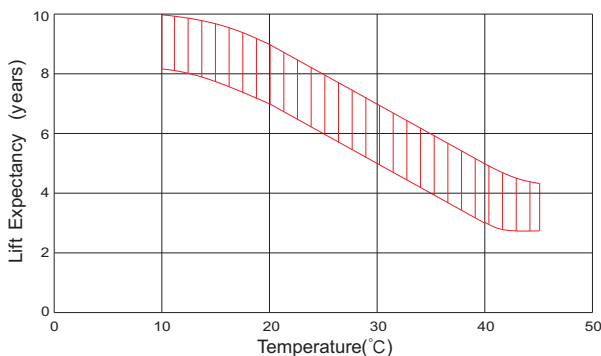
## Temperature Effects On Capacity



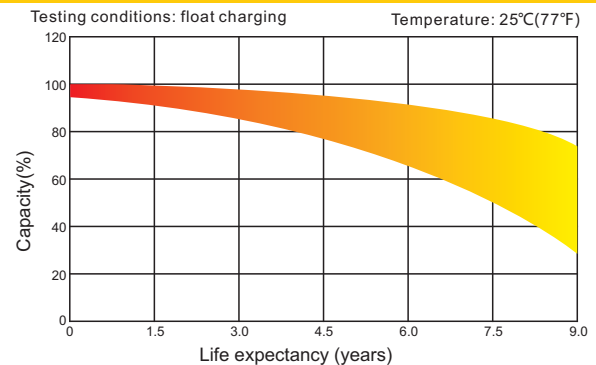
## Storage Characteristics



## Effect Of Temperature On Long Term Life



## Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice,