

# SIN12-3.2 [12V 3,2AH]

## Specification

Cells Per Unit	6
Voltage Per Unit	12
Nominal Capacity	3.2Ah@20hour-rate to 1.75V per cell @25°C
Weight	Approx. 1.29 Kg (Tolerance ±5.0%)
Internal Resistance	Approx. 54 mΩ
Terminal	F1
Max. Discharge Current	32A (5 sec)
Short Circuit Current	166A
Design Life	6~8 years (Float charging)
Max. Charging Current	0.96 A
Reference Capacity	C3 2.48AH C5 2.79AH C10 2.99AH C20 3.20AH
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.

## SINERGY<sup>®</sup> BATTERIES

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

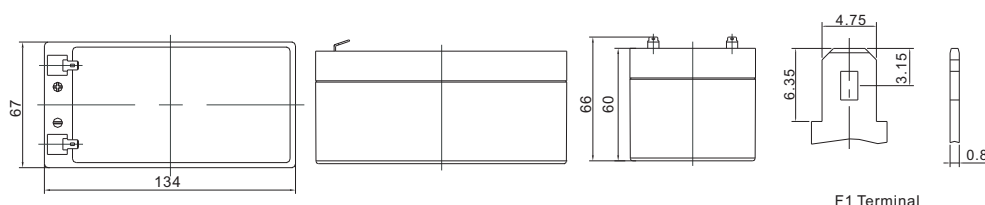
OHSAS 18001



MH 28539

G4M20206-0910-E-16

## Dimensions



Length	134±1.5mm (5.28 inches)
Width	67±1.5mm (2.64 inches)
Height	60±1.5mm (2.36 inches)
Total Height	66±1.5mm (2.60 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

Unit: mm

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

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	12.14	8.581	6.203	3.563	1.955	1.200	0.902	0.729	0.604	0.389	0.316	0.167
1.65V	11.29	8.108	5.930	3.420	1.888	1.162	0.875	0.709	0.588	0.384	0.312	0.164
1.70V	10.19	7.465	5.554	3.269	1.827	1.124	0.851	0.690	0.573	0.378	0.307	0.162
1.75V	9.127	6.833	5.169	3.125	1.760	1.085	0.825	0.672	0.558	0.373	0.303	0.160
1.80V	8.014	6.185	4.773	2.987	1.693	1.046	0.800	0.653	0.544	0.367	0.299	0.158
1.85V	6.361	5.055	3.960	2.572	1.518	0.958	0.739	0.607	0.507	0.344	0.282	0.150

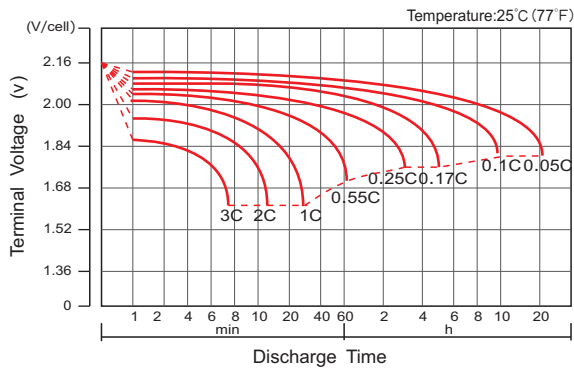
### Constant Power Discharge Characteristics : WPC (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	20.13	14.59	10.84	6.471	3.674	2.275	1.724	1.399	1.164	0.759	0.620	0.328
1.65V	18.93	14.05	10.52	6.278	3.568	2.213	1.677	1.366	1.138	0.752	0.614	0.323
1.70V	17.47	13.17	10.00	6.060	3.474	2.152	1.639	1.334	1.112	0.742	0.605	0.320
1.75V	16.00	12.27	9.442	5.852	3.367	2.087	1.597	1.305	1.088	0.733	0.598	0.316
1.80V	14.35	11.30	8.842	5.650	3.257	2.022	1.554	1.272	1.063	0.722	0.591	0.314
1.85V	11.63	9.402	7.441	4.914	2.939	1.863	1.443	1.186	0.995	0.680	0.557	0.298

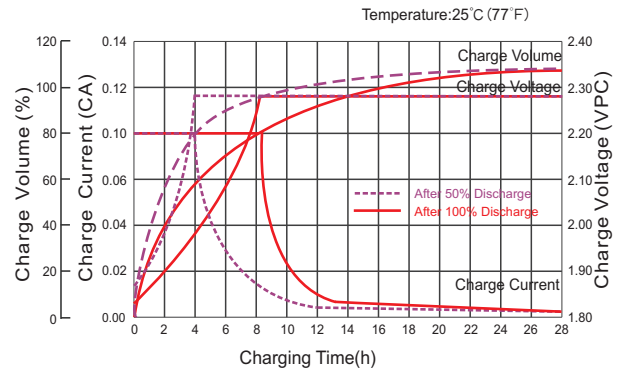
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values. The battery must be fully charged before the capacity test. The C<sub>20</sub> should reach 95% after the first cycle and 100% after the third cycle.

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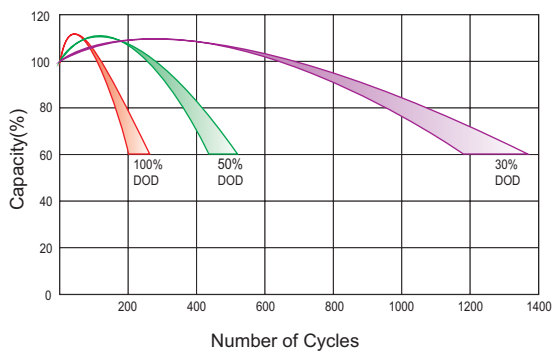
**Discharge Characteristics Curve**



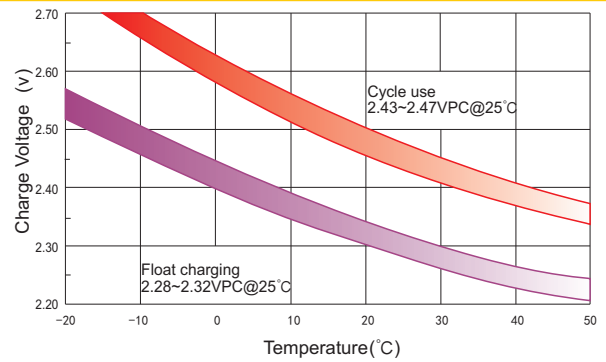
**Charge Characteristic Curve For Standby Use**



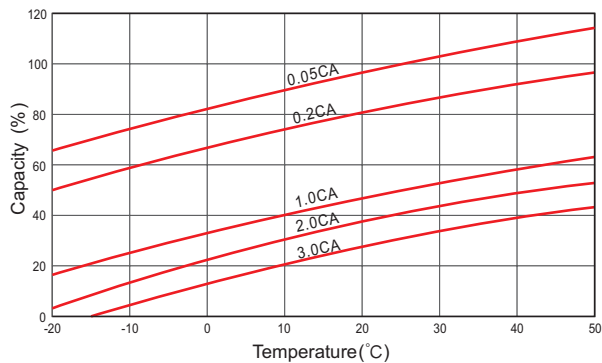
**Cycle Life In Relation To Depth Of Discharge**



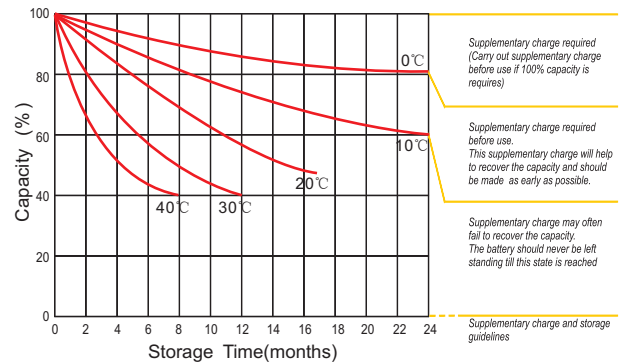
**Relationship Between Charging Voltage And Temperature**



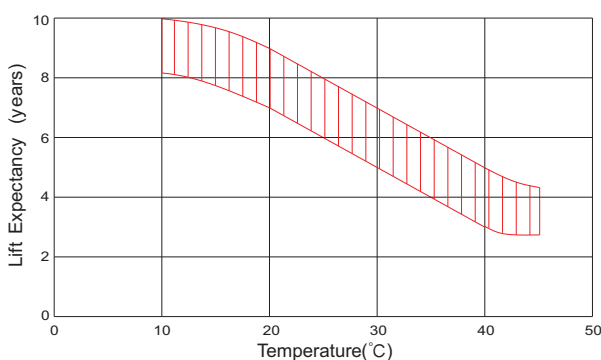
**Temperature Effects On Capacity**



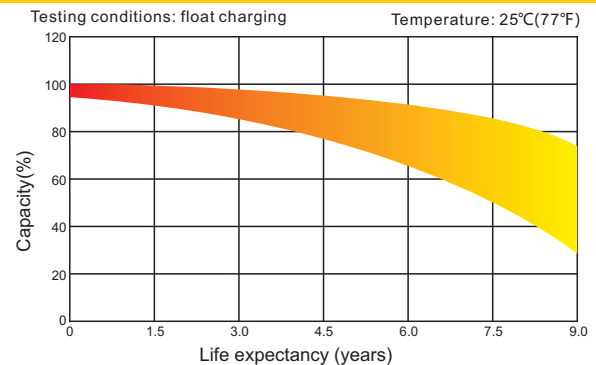
**Storage Characteristics**



**Effect Of Temperature On Long Term Life**



**Life Characteristics Of Standby Use**



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