BATTERY: Constant, Safe POWER for YOU

VRLA AGM SEALED LEAD ACID Battery SM12-18

SM series AGM batteries are designed to have a large amount of stored current discharged between charging sessions, with very heavy non-porous battery plates to withstand repeated major discharging and charging cycle. The VRLA AGM battery uses a different chemistry for the plates active paste material, and a slightly stronger electrolyte than normal battery electrolyte, thus the SM range features higher cyclic life with 10 years of float life when compared to the standard Duration range.

12V Voltage | 18Ah Capacity | AGM Technology | VRLA Battery

GENERAL FEATURES

- **30% more cyclic life through innovation at the PAM additives**
- **Long life expectancy of 10 years in floating condition**
- **Thick flat plate with high Tin low Calcium alloy**
- **Excellent deep discharge recovery capability**
- **Deep cycle performance: up to 700 cycles @50% DOD**

APPLICATIONS

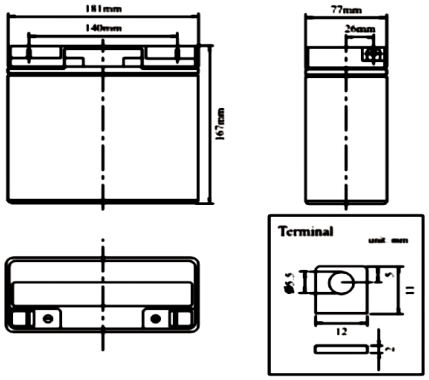
- **Telecom Control Equipments**
- **UPS systems, Inverter**
- **Power Equipments**
- **Standby backup**
- **Emergency Power Systems**

COMPLIED STANDARDS

ISO 14001 ICAS | ISO 9001 SGS | IEC 60896 | UL CE

DIMENSIONS & WEIGHT

Length(mm/inch)	181/7.13
Width(mm/inch)	77/3.03
Height(mm/inch)	167/6.58
Total Height(mm/inch)	167/6.58
Weight(kg/lbs)(±3%)	5.2/11.5



TECHNICAL SPECIFICATIONS

Nominal Voltage		12V(6 cells per unit)
Design Floating Life @25℃		8 Years
Nominal Capacity @25℃(20 hour rate@0.90A,10.8V)		18.0Ah
Capacity @25℃	10hour rate (1.71A,10.8V)	17.1Ah
	5 hour rate (3.21A,10.5V)	16.05Ah
	1 hour rate (11.88A,9.6V)	11.88Ah
Internal Resistance	Full Charged Battery@25℃	≤12.0mΩ
Ambient Temperature	Discharge	-15℃~45℃
	Charge	-15℃~45℃
	Storage	-15℃~45℃
Max.Discharge Current@25℃		108A (5s)
Capacity affected by Temperature (10 hour)	40℃	105%
	25℃	100%
	0℃	85%
	-15℃	65%
Self-Discharge@25℃ per Month		3%
Charge (Constant Voltage) @25℃	Standby Use	Initial Charging Current Less than 5.4A Voltage 13.6-13.8V
	Cycle Use	Initial Charging Current Less than 5.4A Voltage 14.4-14.9V

BATTERY DISCHARGE TABEL

Discharge Constant Current per Cell (Amperes at 25°C)

F.V/Time	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
1.60V	29.80	19.80	13.86	11.88	7.43	5.09	3.39	2.28	1.88	0.99
1.65V	29.25	19.44	13.61	11.66	7.29	5.00	3.33	2.24	1.85	0.97
1.70V	28.71	19.08	13.36	11.45	7.16	4.90	3.27	2.20	1.82	0.95
1.75V	28.17	18.72	13.10	11.23	7.02	4.81	3.21	2.16	1.78	0.94
1.80V	27.09	18.00	12.60	10.80	6.75	4.63	3.08	2.07	1.71	0.90

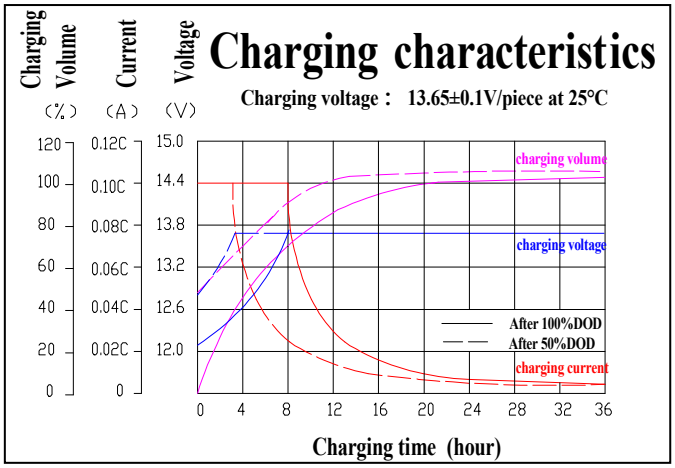
Discharge Constant Power per Cell (Watts at 25°C)

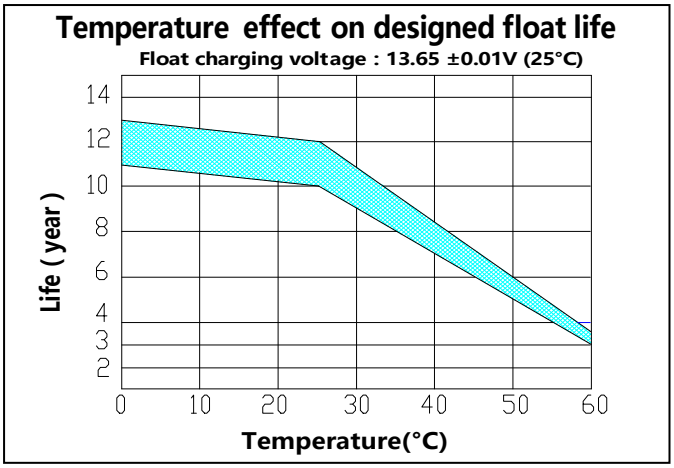
F.V/Time	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
1.60V	57.36	38.12	26.68	22.87	14.29	9.80	6.53	4.39	3.63	1.91
1.65V	56.31	37.42	26.20	22.45	14.03	9.62	6.41	4.31	3.56	1.87
1.70V	55.27	36.73	25.71	22.04	13.77	9.44	6.29	4.23	3.50	1.84
1.75V	54.23	36.04	25.23	21.62	13.51	9.26	6.17	4.15	3.43	1.80
1.80V	52.14	34.65	24.26	20.79	12.99	8.90	5.94	3.99	3.30	1.73

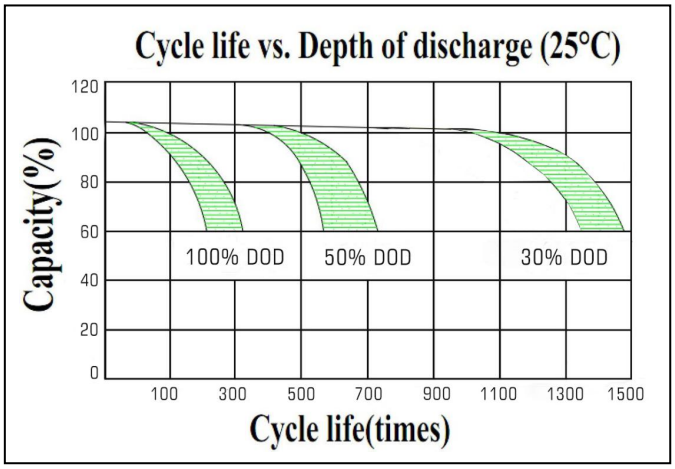
Note: The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Contact **SM SOLAR** for the latest information.

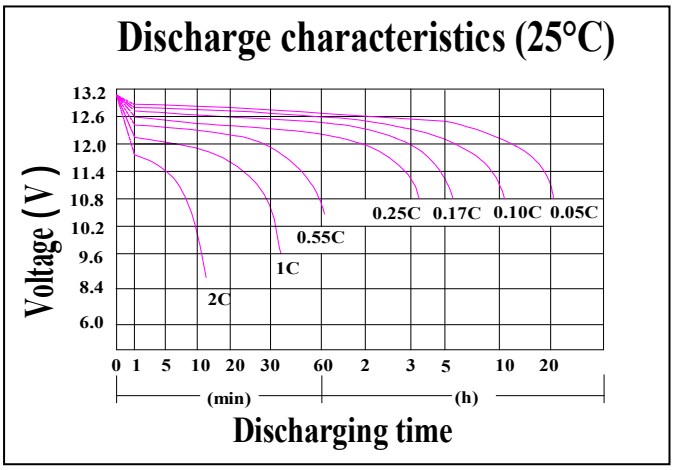
VRLA AGM SEALED LEAD ACID Battery SM12-18

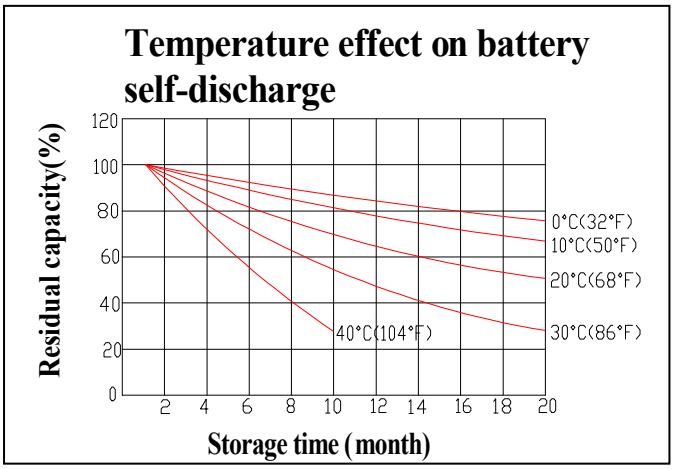
PERFORMANCE CHARACTERISTICS

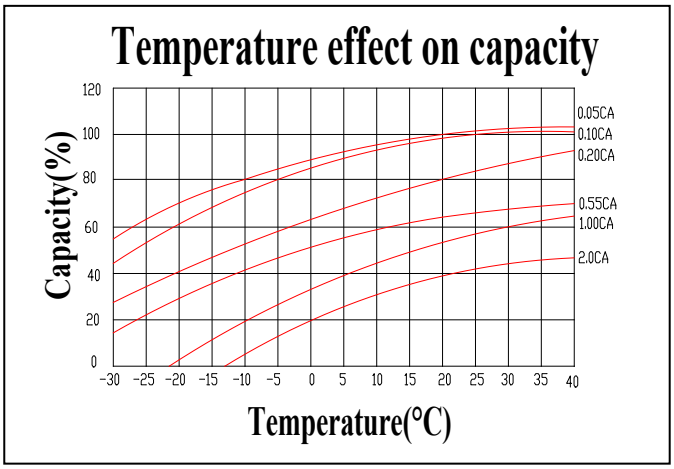












BATTERY CONSTRUCTION

Component	Positive plate	Negative plate	Container &Cover	Safety valve	Terminal	Separator	Electrolyte	Pillar seal
Features	Thick high Sn low Ca grid with special paste	Balanced Pb-Ca grid for improved recombination efficiency	Fire resistance ABS (UL94-V0)	Flame Si-Rubber and aging resistance	Female Copper Insert M5/L1	Advanced AGM separator for high pressure cell design	Dilute high purity sulfuric acid	Two layers epoxy resin seal

SM SOLAR

Website: http://www.smsolar.com.sg