

VRLA AGM Battery

ESR12-12 [12V12Ah]



General Features

- Designed floating charging service life: 8 years (25°C)
- Sealed and maintenance free operation
- Safety valve installation for explosion proof
- Low self-discharge characteristic
- Wide operating temperature range from 0°C~40°C
- Lead Aluminum calcium Tin alloy high energy, prevent corrosion

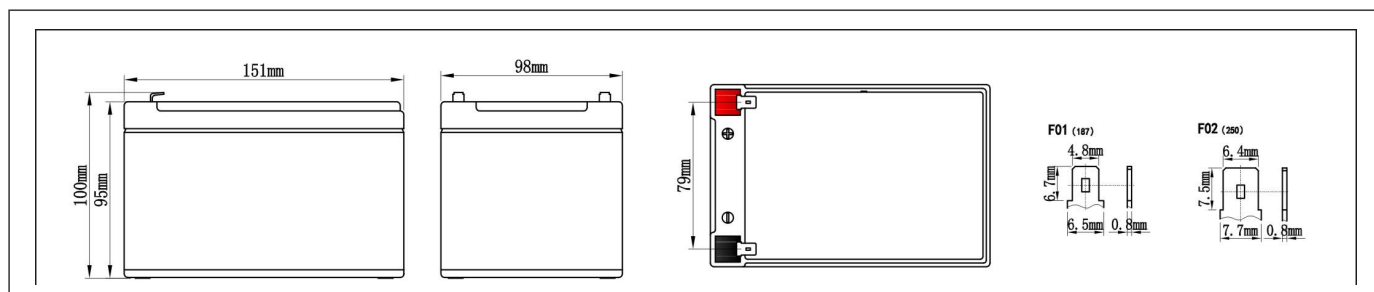
Application

- DC power supply
- Medical equipments
- UPS/EPS power supply
- Emergency lighting systems
- Alarm and security systems

Physical Specifications

Nominal Voltage	Nominal Capacity (20HR)	Dimension				Weight ±2%	Internal Resistance (In full charge status)	Standard Terminals
		L	W	H	TH			
12V	12AH	151±2mm	98±2mm	95±2mm	100±2mm	Approx3.45g (7.61lbs)	≈15.5 mΩ	F01/F02 (standard)

Dimensions



Constant-Voltage Charge

Rated Capacity		Cycle Application	
20 hour rate (0.60A)	12.12AH	1. Limit initial current less than 3.0A.	
10 hour rate (1.20A)	11.40AH	2. Charge until battery voltage (under charge) reaches 14.1V to 14.4V at 25°C(77°F).	
5 hour rate (2.04A)	10.10AH	3. Hold at 14.1V to 14.4V until current drop to under 0.072A for at least 3 hours.	
27 minute rate(12.0A)	6.00AH	4. Temperature compensation coefficient of charging voltage is -30mV/°C.	
7 minute rate (36.0A)	4.20AH	Standby Service	
Capacity affected by Temperature		1. Hold battery across constant voltage source of 13.6to 13.8 volts with current limit 3.0A continuously .When held at this voltage , the battery will seek its own current level and maintain itself in a fully charge status.	
40°C(104°F)	103%	2. Temperature compensation coefficient of charging voltage is -18mV/°C.	
25°C(77°F)	100%		
0°C(32°F)	86%		

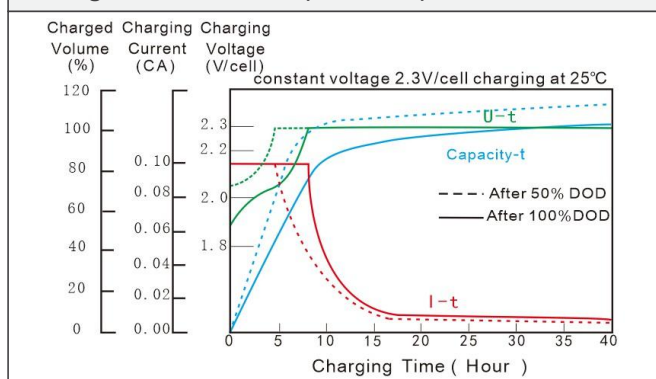
NOTE : The battery should be charged within 6 months of storage, Otherwise, permanent loss of capacity might occur as a result of sulfation

Battery Discharge Table

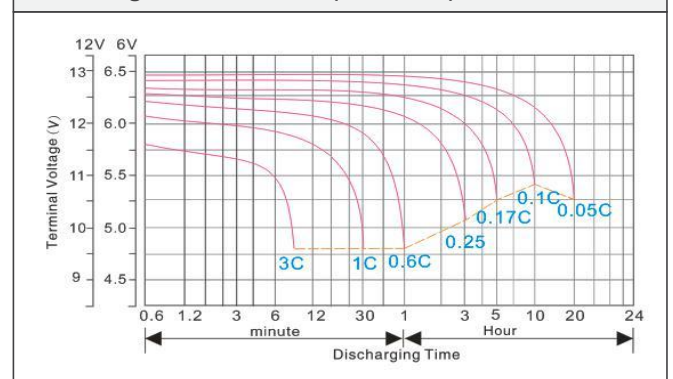
End Voltage (V)	Minute (M)				Hour (H)							
	10	15	30	45	1	1.5	2	3	5	8	10	20
Constant Current Discharge Data Sheet (@25°C) Unit: A												
9.6V	31.9	24.9	12.7	8.98	7.56	6.02	4.48	3.38	2.16	1.44	1.18	0.624
9.9V	30.3	23.7	12.1	8.67	7.38	5.87	4.37	3.30	2.11	1.41	1.17	0.618
10.2V	28.9	22.6	11.5	8.38	7.20	5.73	4.26	3.22	2.06	1.38	1.16	0.612
10.5V	28.6	22.4	11.5	8.30	7.15	5.63	4.10	3.11	2.02	1.37	1.15	0.606
10.8V	28.3	22.2	11.3	8.22	7.10	5.52	3.94	3.00	1.98	1.35	1.14	0.600
Constant Power Discharge Data Sheet (@25°C) Unit: W												
9.6V	385	311	176	124	92.9	71.3	53.6	38.3	25.2	17.6	14.0	7.51
9.9V	366	296	167	120	90.6	69.5	52.3	37.3	24.6	17.2	13.8	7.43
10.2V	349	282	159	116	88.4	67.8	51.0	36.4	24.0	16.9	13.7	7.36
10.5V	337	274	156	114	87.0	66.8	50.3	35.6	23.7	16.8	13.5	7.26
10.8V	325	265	152	111	85.6	65.8	49.6	35.0	23.5	16.6	13.3	7.16

Performance Characteristics

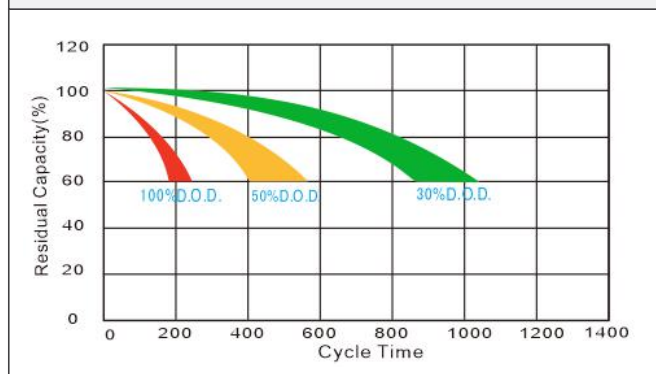
Charge Characteristics (25°C/77°F)



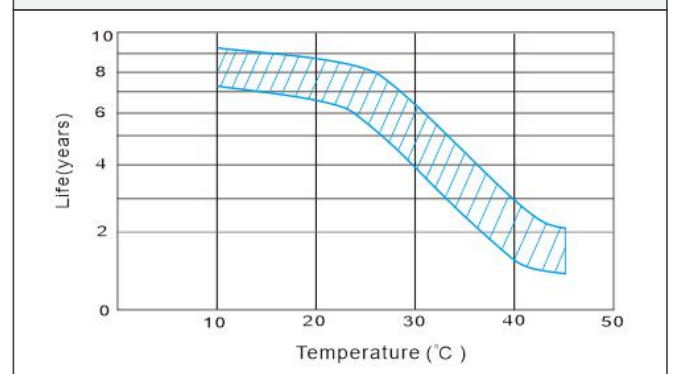
Discharge Characteristic (25°C/77°F)



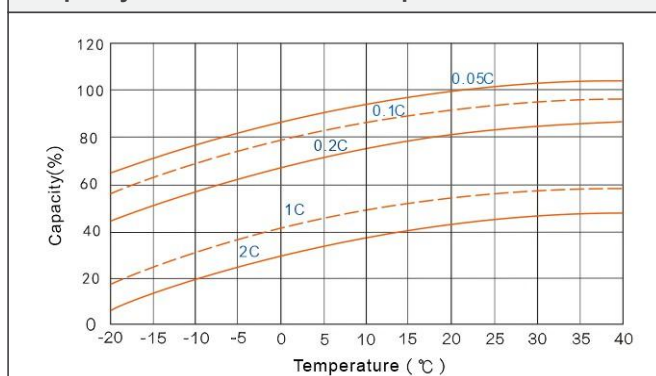
Cycle Life in Relation to Depth of Discharge



Temperature vs Float Life



Capacity Curve At Different Temperature



Self Discharge Characteristics

