

VRLA AGM Battery

ESR33-12 [12V33Ah]



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

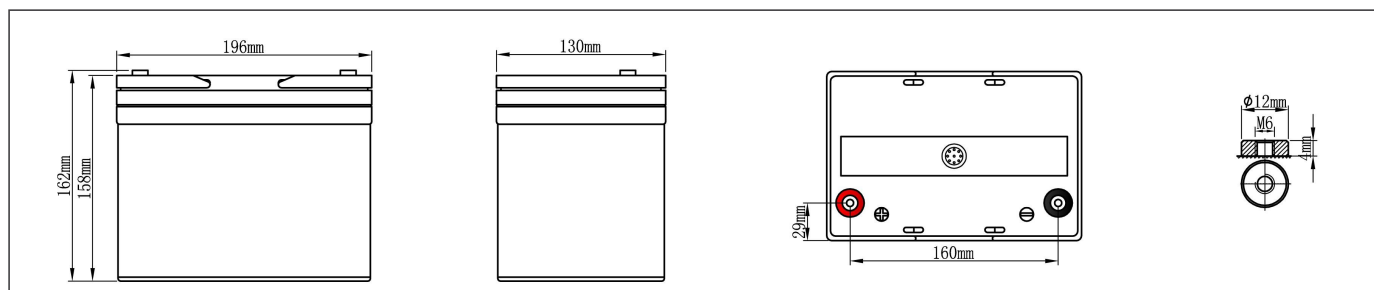
Application

- DC power supply
- Medical equipments
- UPS/EPS power supply
- Telecom stations and power stations

Physical Specifications

Nominal Voltage	Nominal Capacity (10HR)	Dimension				Weight ±2%	Internal Resistance (In full charge status)	Standard Terminals
		L	W	H	TH			
12V	33AH	196±2mm	130±2mm	158±2mm	162±2mm	Approx 9.4kg (20.7lbs)	≈11.5 mΩ	T06 (standard)

Dimensions



Constant-Voltage Charge

Rated Capacity		Cycle Application	
20 hour rate (1.65A)	34.4AH	1. Limit initial current less than 8.25A.	
10 hour rate (3.30A)	33.00AH	2. Charge until battery voltage (under charge) reaches 14.1V to 14.4V at 25°C(77°F).	
5 hour rate (5.61A)	27.55AH	3. Hold at 14.1V to 14.4V until current drop to under 0.198A for at least 3 hours.	
27 minute rate (33A)	17.50AH	4. Temperature compensation coefficient of charging voltage is -30mV/°C.	
7 minute rate (99A)	11.55AH	Standby Service	
Capacity affected by Temperature		1. Hold battery across constant voltage source of 13.6to 13.8 volts with current limit 7.75A 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%		

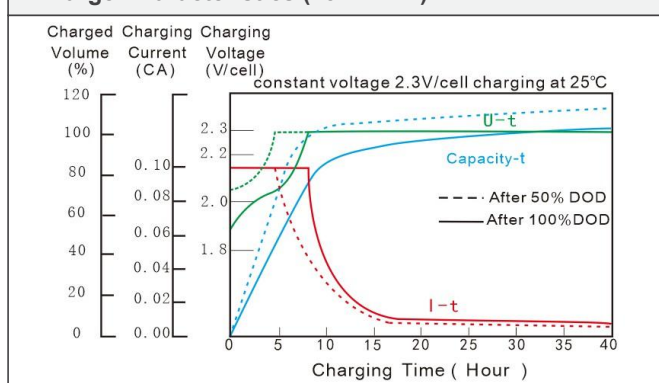
NOTE : The battery should be charged within 6 months of storage, Otherwise, permanent loss of capacity might occur as a result of sulfation

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	88.2	69.1	35.3	24.9	20.9	16.5	12.2	9.26	5.98	3.96	3.42	1.77
9.9V	84.0	65.8	33.6	24.0	20.4	16.1	11.9	9.03	5.83	3.89	3.38	1.76
10.2V	80.0	62.7	32.0	23.2	19.9	15.8	11.6	8.81	5.69	3.81	3.35	1.74
10.5V	79.2	62.0	31.7	23.1	19.8	15.5	11.2	8.54	5.58	3.77	3.32	1.72
10.8V	78.3	61.4	31.5	23.0	19.7	15.3	10.8	8.26	5.47	3.73	3.30	1.69
Constant Power Discharge Data Sheet (@25°C) Unit: W												
9.6V	1053	852	482	341	254	195	147	105	69.0	48.2	38.2	20.6
9.9V	1003	812	459	329	248	190	143	102	67.4	47.2	37.8	20.4
10.2V	955	773	437	318	242	186	140	99.7	65.7	46.3	37.5	20.2
10.5V	923	750	428	311	238	183	138	97.5	65.0	45.9	36.9	19.9
10.8V	889	726	415	303	234	180	136	95.8	64.2	45.4	36.3	19.6

Performance Characteristics

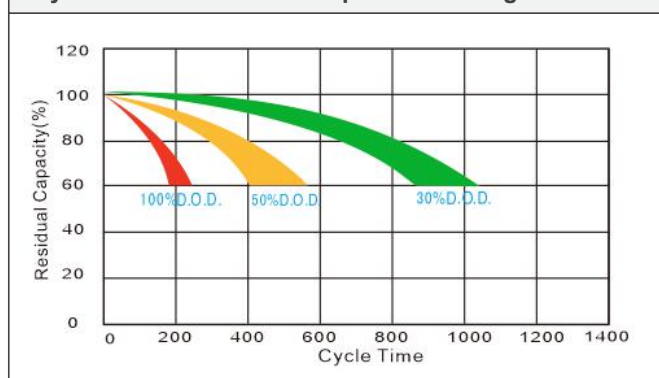
Charge Characteristics (25°C/77°F)



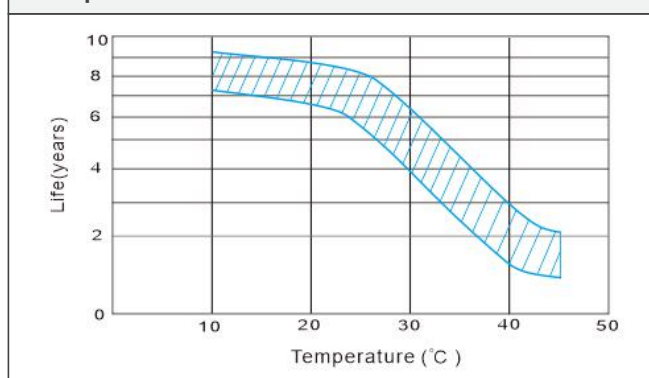
Discharge Characteristic (25°C/77°F)



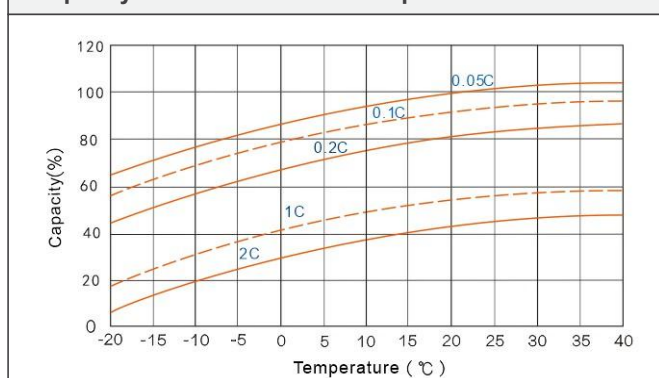
Cycle Life in Relation to Depth of Discharge



Temperature vs Float Life



Capacity Curve At Different Temperature



Self Discharge Characteristics

