



Power your life
ROCKET
Original



VRLA AGM Battery

ESR12-45 [12V45Ah]



General Features

- Designed floating charging service life: 12 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

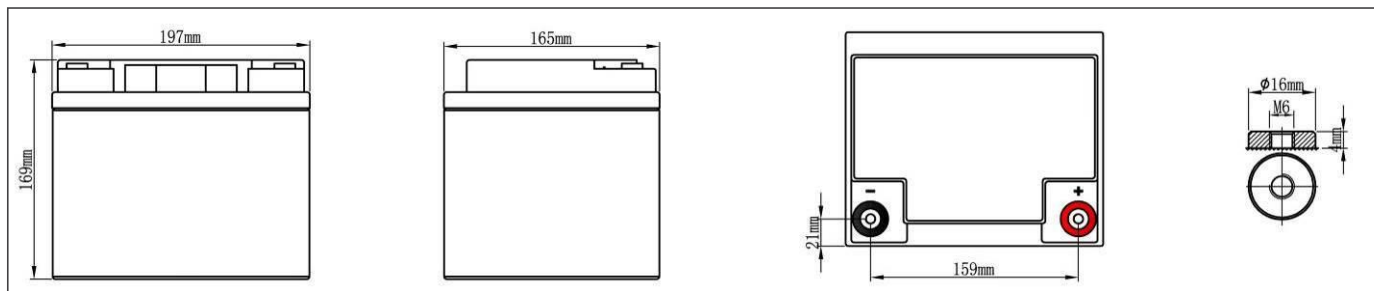
Application

- 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	45AH	197±2mm	165±2mm	169±2mm	169±2mm	Approx 13.5kg (29.76lbs)	≈8.0mΩ	F68 (standard)

Dimensions



Constant-Voltage Charge

Rated Capacity	
20 hour rate (2.25A)	47.4AH
10 hour rate (4.5A)	45.0AH
5 hour rate (7.65A)	38.3AH
3 hour rate (11.25A)	33.9AH
1 hour rate (27.0A)	28.1AH
Capacity affected by Temperature	
40°C(104°F)	103%
25°C(77°F)	100%
0°C(32°F)	86%

Cycle Application	
1. Limit initial current less than 11.25A.	
2. Charge until battery voltage (under charge) reaches 14.1V to 14.4V at 25°C(77°F).	
3. Hold at 14.1V to 14.4V until current drop to under 0.27A for at least 3 hours.	
4. Temperature compensation coefficient of charging voltage is -30mV/°C.	
Standby Service	
1. Hold battery across constant voltage source of 13.6 to 13.8 volts with current limit 11.25A continuously .When held at this voltage , the battery will seek its own current level and maintain itself in a fully charge status.	
2. Temperature compensation coefficient of charging voltage is -18mV/°C.	

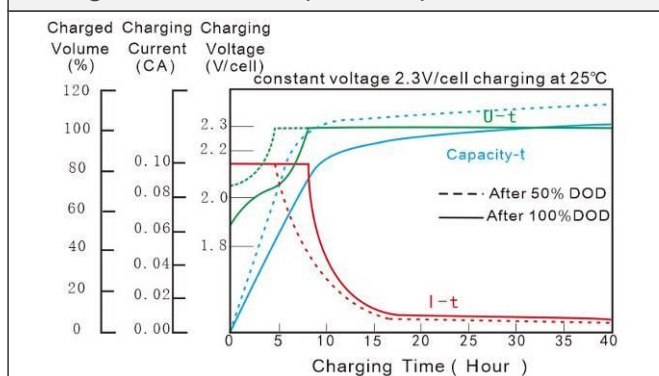
NOTE : The battery should be charged within 6 months of storage, Otherwise, permanent loss of capacity might occur as a result of sulfation

Battery Discharge Table

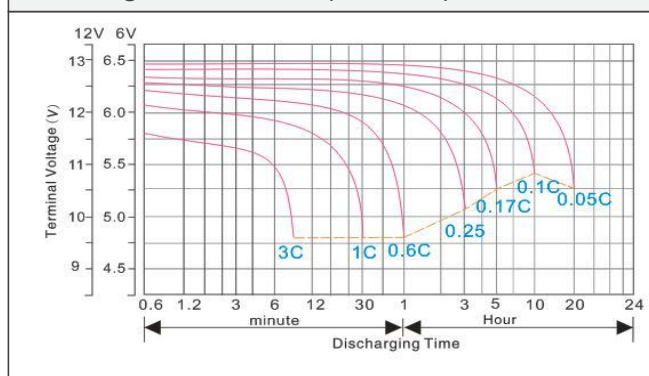
End Voltage (V)	Minute (M)				Hour (H)							
	10	15	30	45	1	1.5	2	3	5	8	10	20
Constant Current Discharge Data Sheet (@25°C) Unit: A												
9.6V	107	84.8	47.4	40.9	28.1	22.5	19.1	11.7	8.14	5.58	4.69	2.44
9.9V	102	81.4	45.3	39.5	27.8	22.0	18.6	11.5	7.97	5.50	4.63	2.41
10.2V	97.4	76.8	43.1	38.3	26.8	21.6	18.2	11.3	7.78	5.40	4.59	2.38
10.5V	92.8	73.3	40.9	36.9	26.4	21.2	17.6	11.1	7.65	5.26	4.55	2.37
10.8V	88.2	69.9	39.1	35.6	25.9	20.7	17.2	10.8	7.42	5.17	4.50	2.34
Constant Power Discharge Data Sheet (@25°C) Unit: W												
9.6V	1292	1072	663	465	393	288	216	160	104	79	61.0	32.7
9.9V	1231	1020	631	450	385	281	211	156	102	78	60.3	32.4
10.2V	1173	971	602	433	374	274	206	153	99	76	59.6	32.1
10.5V	1116	925	573	418	365	267	200	149	96	75	59.2	31.6
10.8V	1064	881	545	405	357	261	195	146	94	74	58.5	31.3

Performance Characteristics

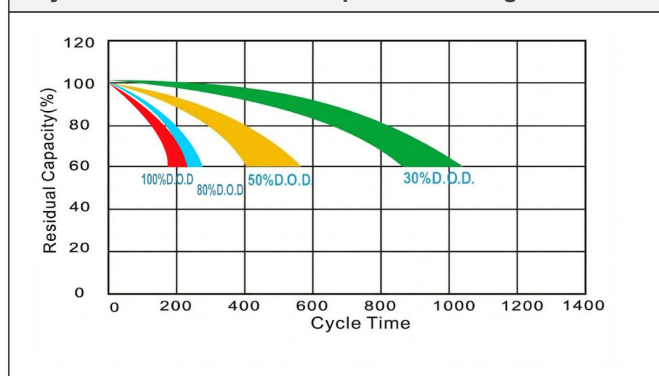
Charge Characteristics (25°C/77°F)



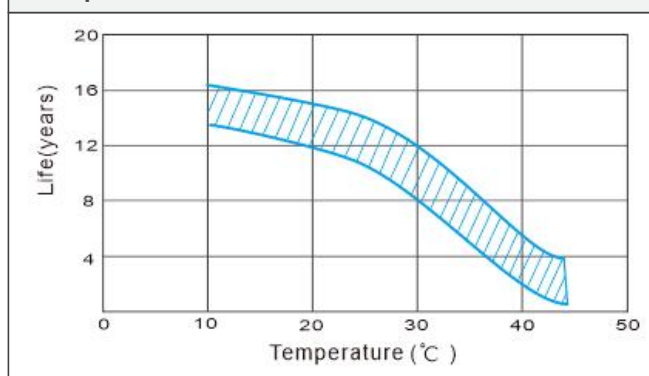
Discharge Characteristic (25°C/77°F)



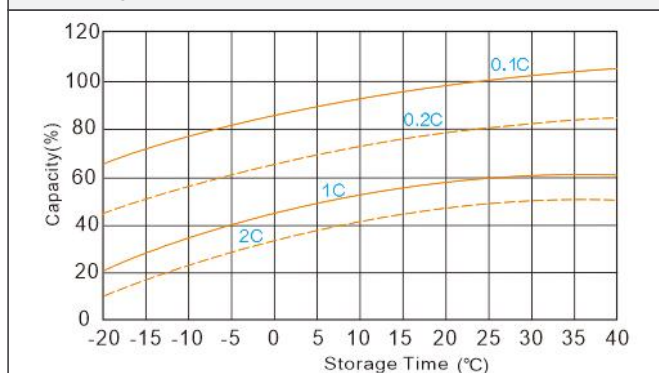
Cycle Life in Relation to Depth of Discharge



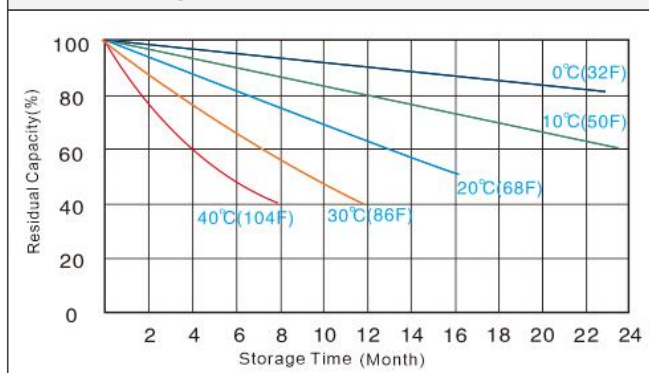
Temperature vs Float Life



Capacity Curve At Different Temperature



Self Discharge Characteristics



☆The datasheet subjects to change without prior notice, please contact with us if have any questions.