

ROCKET

GEL Deep Cycle Battery

ESR100-12 [12V100Ah]



General Features

- Designed floating charging service life: 12 years (25°C)
- Safety valve installation for explosion proof ,Sealed and maintenance free operation
- By using strong grids, high purity lead and patented Gel electrolyte
- Extremely low self-discharge characteristic
- Wide operating temperature range from -20°C~55°C
- Lead Aluminum calcium Tin alloy high energy, prevent corrosion

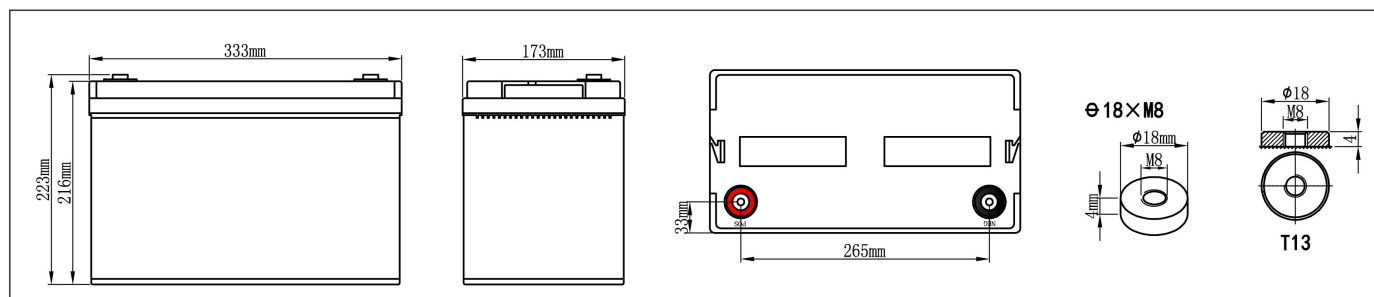
Application

- Pumps systems
- Solar lighting systems
- Telecom stations and power stations
- Solar/wind energy storage systems

Physical Specifications

Nominal Voltage	Nominal Capacity (10HR)	Dimension				Weight ±2%	Internal Resistance (In full charge status)	Standard Terminals
		L	W	H	TH			
12V	100AH	333±3mm	173±2mm	216±3mm	223±3mm	Approx 28.0kg (61.73lbs)	≈5.2m Ω	T13 (standard)

Dimensions



Constant-Voltage Charge

Rated Capacity	
20 hour rate (5.0A)	105.0AH
10 hour rate (10.0A)	100.0AH
5 hour rate (17.0A)	85.0AH
3 hour rate (25.0A)	75.0AH
1 hour rate (60.0A)	63.0AH
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 20.0A.
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 under0.60A 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 20.0A 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.

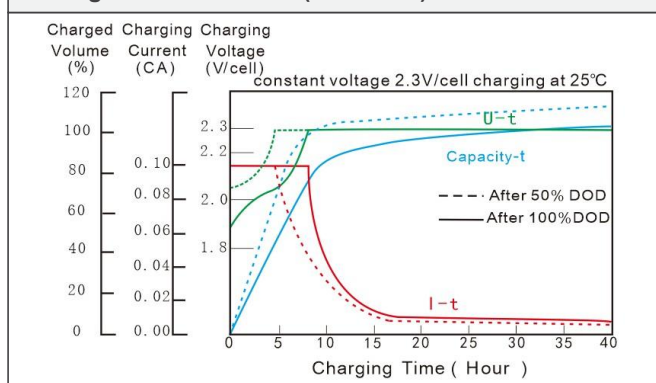
NOTE : The battery should be charged within 6 months of storage, Otherwise, permanent loss of capacity might occur as a result of sulfation

Battery Discharge Table

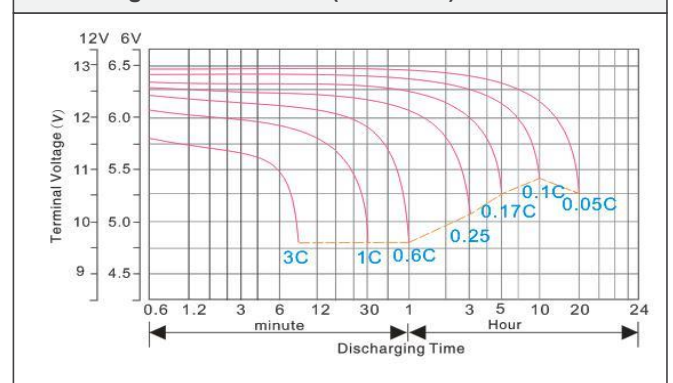
End Voltage (V)	Minute (M)				Hour (H)							
	10	15	30	45	1	1.5	2	3	5	8	10	20
Constant Current Discharge Data Sheet (@25°C) Unit: A												
9.6V	243	192	108	93	63	50	42.3	26.0	18.1	12.4	10.41	5.41
9.9V	232	183	103	90	62	49	41.2	25.6	17.7	12.2	10.30	5.36
10.2V	221	174	98	87	60	48	40.2	25.0	17.3	12.0	10.20	5.30
10.5V	210	166	93	84	59	47	39.3	24.6	17.0	11.7	10.10	5.25
10.8V	200	158	89	81	58	46	38.3	24.0	16.5	11.5	10.00	5.20
Constant Power Discharge Data Sheet (@25°C) Unit: W												
9.6V	2714	2249	1392	975	811	592	443	330	213	161.3	124.9	67.1
9.9V	2585	2142	1325	942	792	577	432	322	208	158.1	123.6	66.5
10.2V	2462	2040	1262	911	772	563	421	314	203	155.0	122.4	65.8
10.5V	2345	1943	1202	880	753	549	411	306	198	152.0	121.2	65.1
10.8V	2233	1850	1145	850	735	536	401	299	193	149.0	120.0	64.5

Performance Characteristics

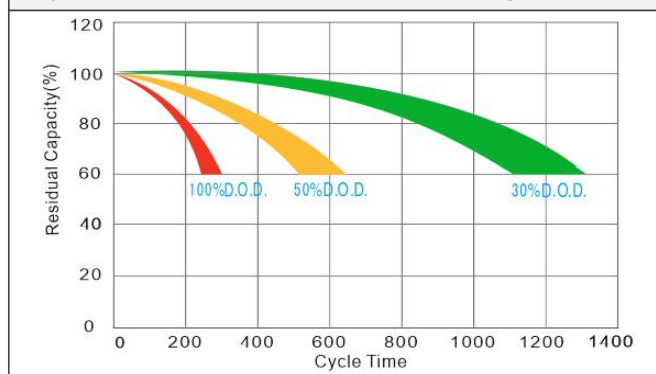
Charge Characteristics (25°C/77°F)



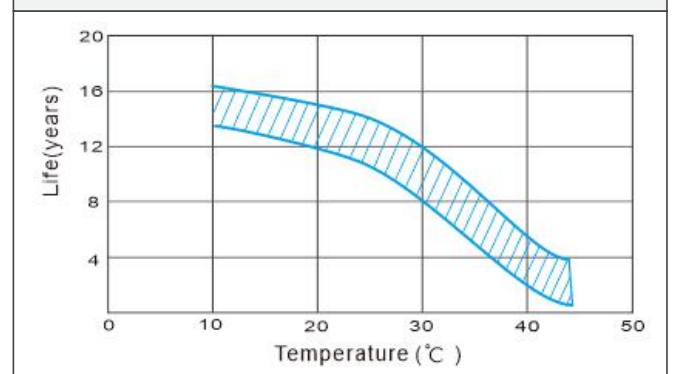
Discharge Characteristic (25°C/77°F)



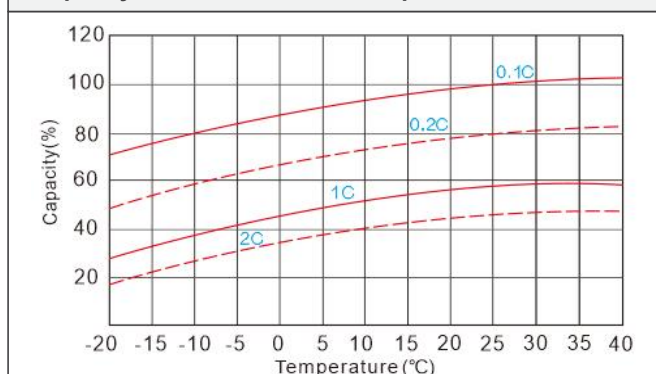
Cycle Life in Relation to Depth of Discharge



Temperature vs Float Life



Capacity Curve At Different Temperature



Self Discharge Characteristics

