

VRLA AGM Battery

BT-HSE-40-12 [12V40Ah]



General Features

- Designed floating charging service life: 12 years (25°C).
- AGM technology for efficient gas recombination of up to 99%.
- Sealed and maintenance free operation, safety valve for explosion proof.
- Low self-discharge characteristic, ≤ 3% of capacity per month at 20°C (average).
- Wide operating temperature range with charge from -10°C~60°C, discharge from -20°C~60°C, storage from -20°C~60°C.
- Flat Plates in Lead Aluminum Calcium Tin alloy high energy, prevent corrosion.
- ABS flame retardant case, classified to UL94-V0 is available on request.

Applications

- DC power supply.
- UPS/ EPS power supply.
- Electrical devices & instruments.
- Security and fire alarm systems.
- Telecom stations and power stations.
- Medical equipment.
- Emergency lighting systems.

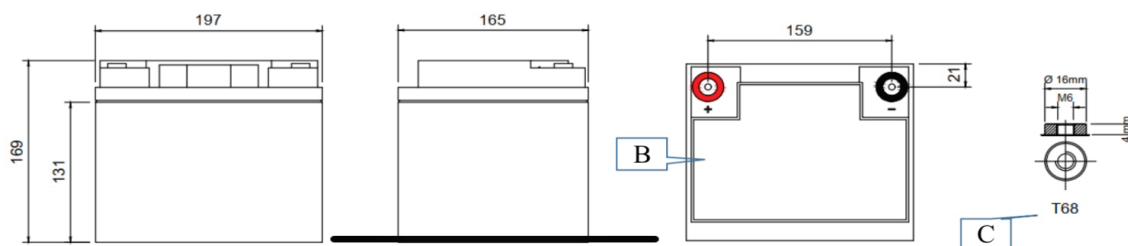
Battery Construction

Component	Battery Container	Safety valve	Terminal	Separator	Electrolyte
Raw material	ABS	Rubber	Copper alloy	Fiberglass	Sulfuric acid

Physical Specifications

Nominal Voltage/ No. of cell	Nominal Capacity (10HR)	Dimension (±3mm)				Weight (±3%)	Internal Resistance (In full charge status)	Standard Terminals
		L	W	H	TH			
12V/6 cells	40Ah	197 mm	165 mm	169 mm	169 mm	Apx. 12.2 kg (26.84 lbs)	≤ 9.7 mΩ	T68 (standard)

Dimensions



Constant-Voltage Charge

Rated Capacity at 77°F(25°C)	
20 hour rate (2.08A to 10.8V)	41.6Ah
10 hour rate (4.00A to 10.8V)	40.0Ah
5 hour rate (6.75A to 10.5V)	33.8Ah
3 hour rate (9.79A to 10.5V)	29.4Ah
1 hour rate (23.5A to 10.2V)	23.5Ah
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 12A
2. Charge until battery voltage (under charge) reaches 14.1V to 14.7V at 25°C(77°F)
3. Hold at 14.1V to 14.7V until current drop to under 0.2A 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 13.5 to 13.8 volts at 25°C(77°F) with current limit 12A 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
Max. discharge current (5s): 420A Short Circuit Current: 950A

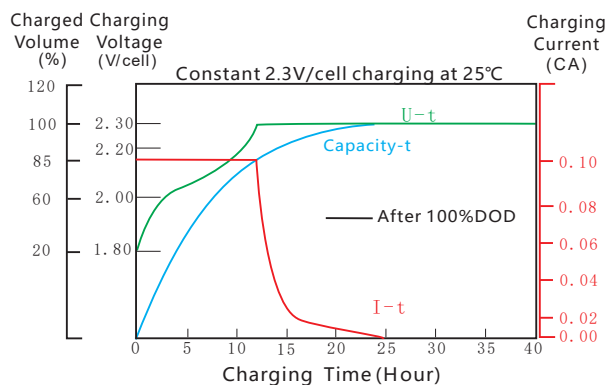
NOTE: All data shall be changed without notice. Saite reserves the right to explain and update the information contained hereinto. The battery should be charged within 6 months of storage, Otherwise, permanent loss of capacity might occur as a result of sulfation

Battery Discharge Table

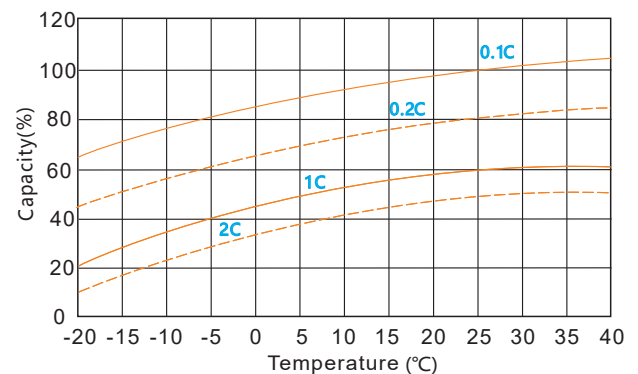
End Volts/ Cell	Minute (M)			Hour (H)							
	10	15	30	1	1.5	2	3	5	8	10	20
Constant Current Discharge Data Sheet (@25°C) Unit: A											
1.60V	94.5	75.2	42.0	24.5	20.0	17.0	10.4	7.24	4.96	4.17	2.17
1.65V	90.4	71.9	40.2	24.0	19.6	16.6	10.2	7.08	4.87	4.13	2.15
1.70V	86.4	68.6	38.3	23.5	19.2	16.2	10.0	6.92	4.78	4.09	2.13
1.75V	82.3	65.3	36.5	23.0	18.8	15.7	9.79	6.75	4.68	4.04	2.10
1.80V	78.2	62.0	34.6	22.5	18.4	15.3	9.59	6.59	4.59	4.00	2.08
Constant Power Discharge Data Sheet (@25°C) Unit: W											
1.60V	176	152	90.3	52.7	39.3	29.5	21.8	14.2	10.8	8.33	4.48
1.65V	168	146	86.3	51.4	38.5	28.8	21.3	13.9	10.6	8.25	4.43
1.70V	161	139	82.3	50.2	37.6	28.1	20.9	13.6	10.4	8.17	4.38
1.75V	153	133	78.3	48.9	36.7	27.4	20.5	13.2	10.2	8.08	4.33
1.80V	145	126	74.3	47.7	35.8	26.7	20.0	12.9	10.1	8.00	4.28

Performance Characteristics

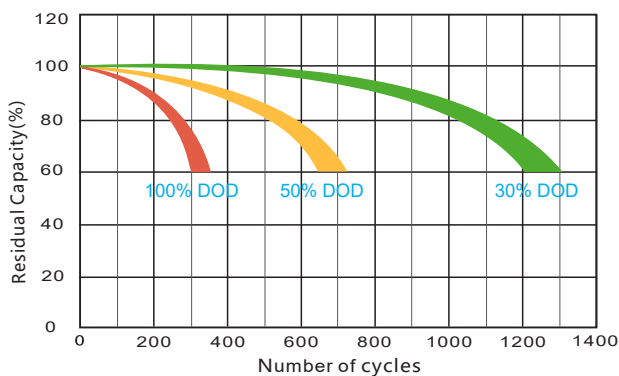
Charge Characteristic (25°C/77°F)



Capacity Curve at Different Temperature



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristic

