

## Specification

Nominal Voltage (V)	12V (6 cells in series)	
Rated Capacity	20Ah	(C <sub>20</sub> , 1.75V/cell)
Dimensions(mm)	Length	181 ± 2 mm
	Width	77 ± 1.5 mm
	Height	165 ± 2 mm
	Total Height	165 ± 2 mm
Nominal Capacity @25°C (Ah)	20 Hour rate (1.010A to 10.5 volts)	20.2Ah
	10 Hour rate (1.930A to 10.5 volts)	19.3Ah
	5 Hour rate (3.450A to 10.5 volts)	17.2Ah
	1 Hour rate (13.00A to 9.6 volts)	13.0Ah
	15 min rate (38.50A to 9.6 volts)	9.62Ah
Approx. Weight	5.6 kg	
Terminal	T10	
Max.Discharge Current	300A @25°C (5s)	
Internal Resistance	10mΩ @25°C (Full Charged Battery)	
Floating Design Life	5 years @25°C	
Ambient Temperature	Charge:	-15°C~50°C
	Discharge:	-20°C~60°C
Storage:	Storage:	-20°C~50°C
	Container Material	A.B.S , UL94-HB , UL94-V0 , Optional
Self Discharge	VRLA batteries can be stored for more than 6 months at 25°C. Self-Discharge ratio less than 3% per month at 25°C. Please charge batteries before using.	

## Certification



## Constant Current Discharge Characteristics (A), (25°C)

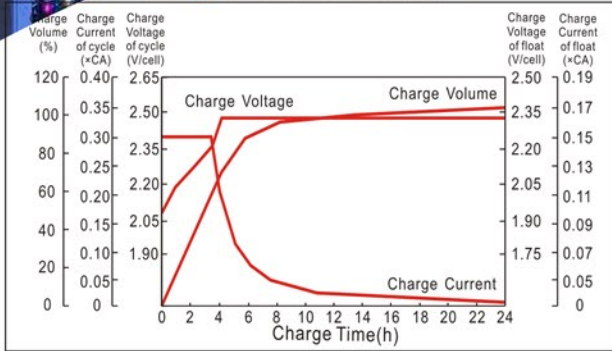
F.V/TIME	5min	10min	15min	30min	60min	2H	3H	5H	8H	10H	20H
1.60V/cell	78.90	51.70	38.50	20.50	13.00	7.324	5.230	3.528	2.336	2.000	1.070
1.67V/cell	75.25	49.80	37.40	20.20	12.85	7.266	5.164	3.502	3.038	1.975	1.051
1.70V/cell	71.60	47.90	36.30	19.90	12.71	7.210	5.100	3.476	2.300	1.950	1.032
1.75V/cell	64.30	44.90	34.30	19.30	12.55	7.150	5.050	3.450	2.280	1.930	1.010
1.80V/cell	57.70	42.00	32.30	18.70	12.37	7.090	4.990	3.410	2.250	1.900	0.970

## Constant Wattage Discharge Characteristics (Watt), (25°C)

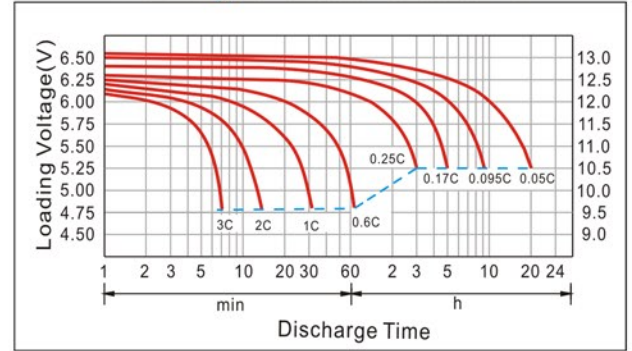
F.V/TIME	5min	10min	15min	30min	60min	2H	3H	5H	8H	10H	20H
1.60V/cell	142.7	94.35	71.40	39.12	25.78	14.53	10.425	7.038	4.660	3.993	2.140
1.67V/cell	137.3	91.72	70.00	38.72	25.54	14.44	10.302	6.989	6.063	3.947	2.104
1.70V/cell	131.9	89.01	68.56	38.31	25.31	14.36	10.183	6.940	4.592	3.900	2.067
1.75V/cell	120.0	84.94	65.38	37.47	25.02	14.25	10.092	6.894	4.556	3.863	2.028
1.80V/cell	108.7	80.15	62.14	36.62	24.68	14.14	9.980	6.820	4.500	3.803	1.948



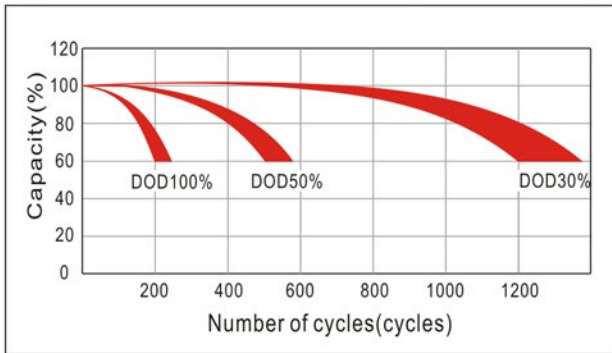
### Charge Characteristics Curve



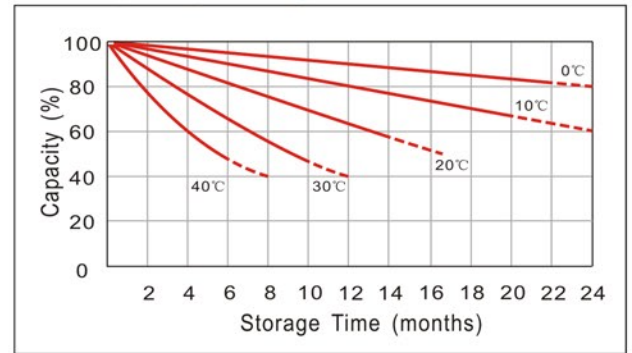
### Discharge Characteristics Curve



### Cycle service life in relation to depth of discharge



### Capacity Storage Characteristics



### Capacity Factors with Different Temperature

Battery type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL Battery	6V&12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%
	2V	60%	75%	85%	88%	92%	99%	100%	103%	105%	106%
AGM Battery	6V&12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%
	2V	55%	70%	80%	85%	92%	99%	100%	104%	108%	110%

## Maintenance & Cautions

#### ☑ Charging Procedure:

Application	Charging method	Charge voltage at 25°C	Temperature compensation coefficient of charging voltage	Max.charging current	Temperature
For standby power source	Constant voltage charging (With current restriction)	2.25~2.30 V/cell	-3mV/°C/cell	0.2CA	-15~50°C
For cycle service		2.45~2.50 V/cell	-4mV/°C/cell	0.3CA	

- ☑ Every month, recommend inspection every battery voltage.
- ☑ Every three months, recommend equalization charge for one time. **Equalization charge method:**  
 Step 1: Discharge: 100% rate capacity discharge.  
 Step 2: Charge: Max. Current 0.3CA, constant voltage 2.45~2.50V/Cell charge 24h.
- ☑ Length of service life will be directly affected by the number of discharge cycles, depth of discharge, Ambient temperature and charging voltage.
- ☑ Charge the batteries at least once every six months, if they are stored at 25°C. **Charging Method:**  
 Constant Voltage :  $-0.2C \times 2h + 2.4 \sim 2.45V/cell \times 24h$  , Max. Current 0.25CA  
 Constant Current :  $-0.2C \times 2h + 0.1C \times 12h$   
 Fast :  $-0.2C \times 2h + 0.3C \times 4h$

#### ☑ Terminal of torque:

Bolt	M5	M6	M8
Terminal	T3、T10	T4、T7、T11、T12、T13	T5、T6、T8、T9、T14
Torque	6~7N.m	8~10N.m	10~12N.m