TC12-75-G (12V75Ah/20hr)

Design Life: 12 years

Gel battery shows some distinctive advantages over flooded battery or AGM battery, such as super thermal stability, high deep discharge capability, good recovery from deep discharge , even if the battery is left discharged for three days, it will recover to 100% of capacity. With the above-mentioned advantages, the gel battery has long service life, specially suitable for motive power applications, such as golf trailer, sruubber, folklift,etc.The deep discharge cycles increased 50% as compared with the AGM battery.

Battery Construction

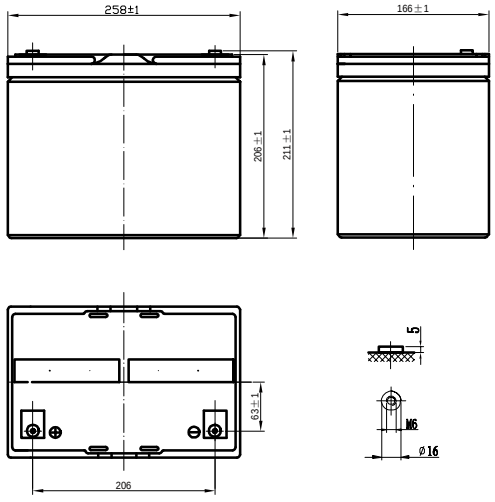
Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	PVC	Gelled acid

General Features

- Nanometer SiO_2 and H_2SO_4 gelled electrolyte technology for efficiency gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.
- Case and cover avaiable in both standard and flame restardant ABS.

Dimensions and Weight

Length(mm / inch)	258 / 10.16
Width(mm / inch)	166 / 6.54
Height(mm / inch)	206 / 8.11
Total Height(mm / inch)	215 / 8.46
Approx. Weight(Kg / lbs)	24.0 / 52.9



Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Design Life	12 years
Nominal Capacity 77ºF(25ºC)	
20 hour rate (3.75A, 10.8V)	75Ah
10 hour rate (7.41A, 10.8V)	74.1Ah
5 hour rate (13.4A, 10.5V)	67.0Ah
1 hour rate (49.5A, 9.6V)	49.5Ah
Internal Resistance	
Fully Charged battery 77ºF(25ºC)	7.5mOhms
Self-Discharge	
2% of capacity declined per month at 20ºC(average)	
Operating Temperature Range	
Discharge	-20~60ºC
Charge	-10~60ºC
Storage	-20~60ºC
Max. Discharge Current 77ºF(25ºC)	700A(5s)
Short Circuit Current	1800A
Charge Methods: Constant Voltage Charge 77ºF(25ºC)	
Cycle use	14.4-14.7V
Maximum charging current	21.6A
Temperature compensation	-20mV/ºC
Standby use	13.5-13.8V
No charge current limit is required	
Temperature compensation	-30mV/ºC

Discharge Constant Current (Amperes at 77ºF25ºC)

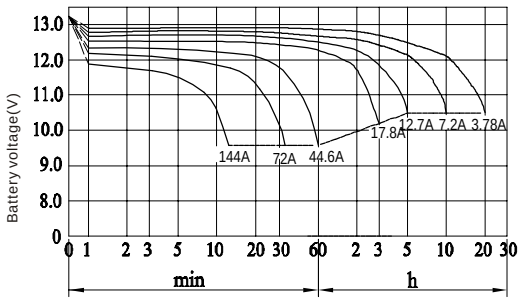
End point volts/cell	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	151	124	72.0	44.6	18.7	13.7	7.56	4.03
1.65V	143	115	70.6	43.2	18.2	13.2	7.49	3.96
1.70V	134	109	69.1	41.8	17.8	13.0	7.34	3.89
1.75V	125	101	67.7	40.3	17.5	12.7	7.27	3.85
1.80V	117	92.2	64.8	38.2	16.8	12.2	7.20	3.78

Discharge Constant Power (Watts at 77ºF25ºC)

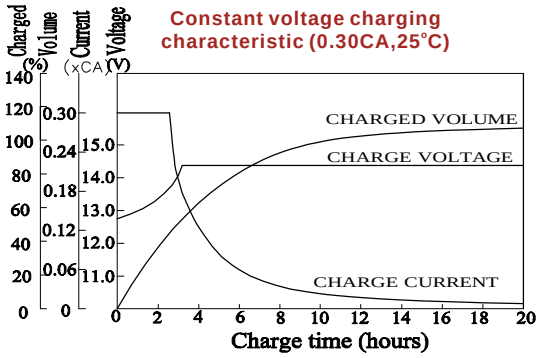
End point volts/cell	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	259	210	135	83.6	35.0	26.3	14.6	7.93
1.65V	246	208	129	79.5	33.3	24.8	13.8	7.48
1.70V	240	200	123	76.2	31.5	23.6	13.0	7.15
1.75V	228	187	119	73.5	30.0	23.1	12.6	6.90
1.80V	216	177	114	70.2	28.2	21.5	11.8	6.65

(Note)The above characteristics data are average values obtained within three charge/discharge cycles not the mimimum values.

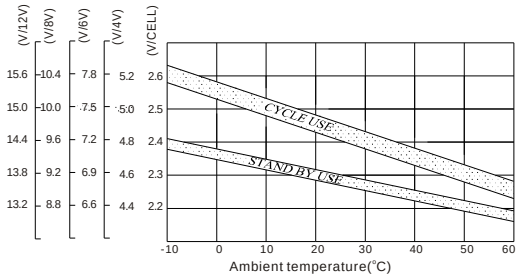
Discharge characteristic (25°C)



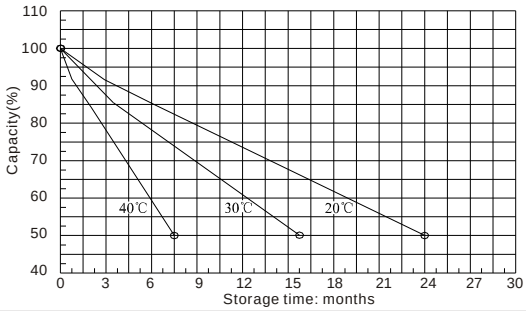
Constant voltage charging characteristic (0.30CA,25°C)



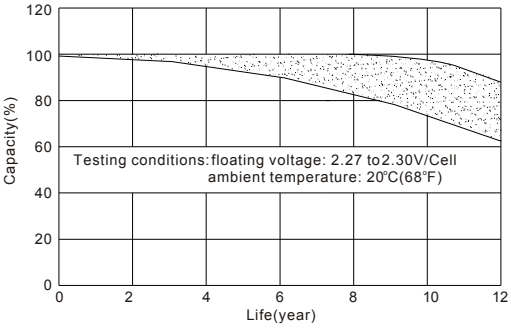
Relationship between charging voltage and temperature



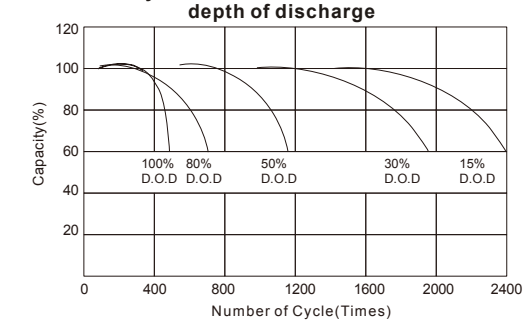
Self-discharge characteristic



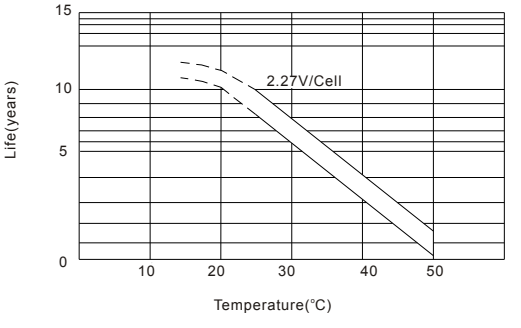
Life characteristics of standby use



Cycle service life in relation to depth of discharge



Temperature effects on float life



Temperature effects on capacity