TC12-80-G (12V80Ah/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

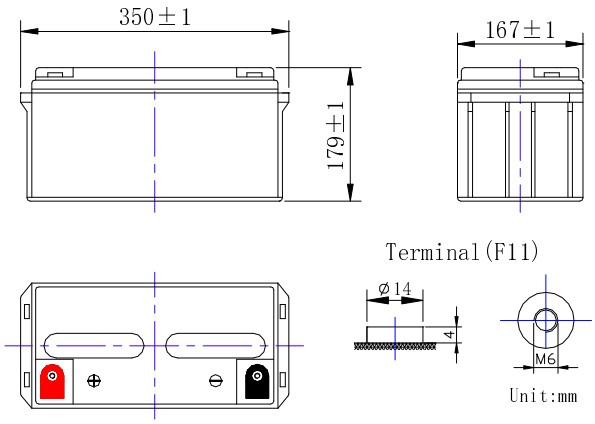
Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	PVC	Gelled acid

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.

SPECIFICATION

Nominal voltage ····· 12V
Number of cell ····· 6
Length(mm/inch) ····· 350/13.78
Width(mm/inch ····· 167/6.57
Height(mm/inch) ····· 179/7.05
Total Height(mm/inch) ····· 179/7.05
Approx. Weight(kg/lbs) ····· 23/50.7



Performance Characteristics

Nominal Voltage 12V
Number of cell 6
Design Life 12 years

Capacity 77°F(25℃)	100 hour rate (1A、11.1V)	100Ah
	20 hour rate (4A、10.8V)	80Ah
	10 hour rate (7.5A、10.5V)	75Ah
	1 hour rate (48A、9.6V)	48Ah

Internal Resistance
Fully Charged battery 77ºF(25ºC) 7.0mOhms
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) 750A(5s)
Short Circuit Current 1900A
Charge Methods: Constant Voltage Charge 77ºF(25ºC)
Cycle use 14.4-14.7V
Maximum charging current 24.0A
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 77°F25℃)

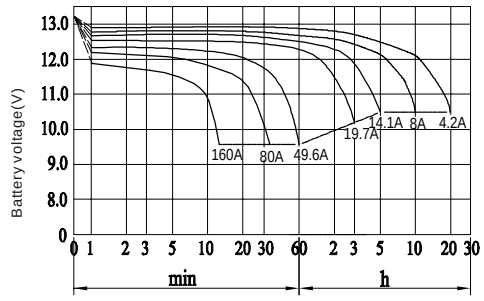
End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	233	176	138	82.0	48.0	20.1	13.7	7.70	4.20
1.65V	220	168	132	78.5	46.6	19.7	13.6	7.60	4.20
1.70V	206	159	126	74.3	45.2	19.2	13.4	7.60	4.15
1.75V	192	149	120	69.6	43.8	18.7	13.2	7.50	4.10
1.80V	179	139	112	64.4	42.3	18.0	12.8	7.30	4.00

Discharge Constant Power (watts at 77°F25℃)

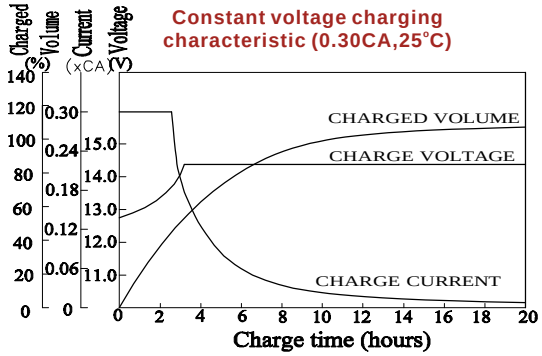
End Point Volts/Cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	416	310	263	150	117	96.0	53.8	39.2	27.1
1.65V	395	299	250	148	115	93.9	52.7	36.4	26.6
1.70V	374	287	236	145	112	92.2	51.7	35.7	26.2
1.75V	353	276	223	143	109	90.3	50.8	35.0	25.6
1.80V	333	264	209	140	106	88.6	49.9	34.4	25.0

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

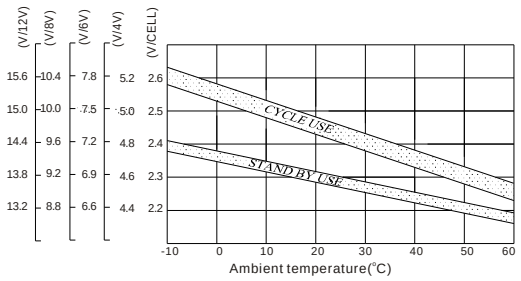
Discharge characteristic (25°C)



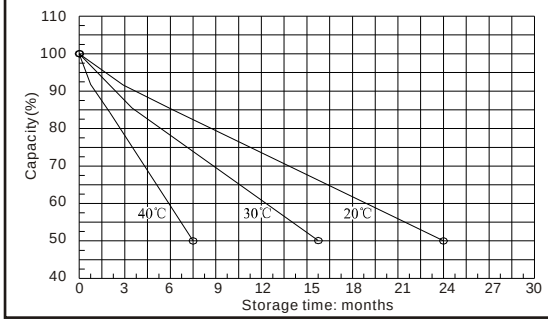
Constant voltage charging characteristic (0.30CA,25°C)



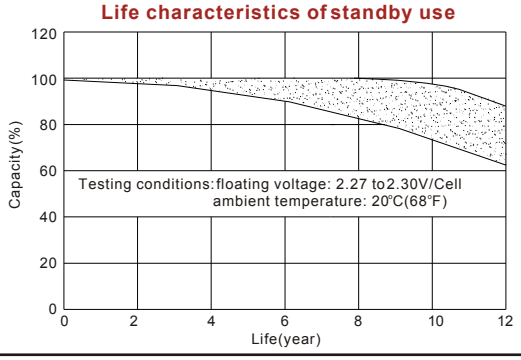
Relationship between charging voltage and temperature



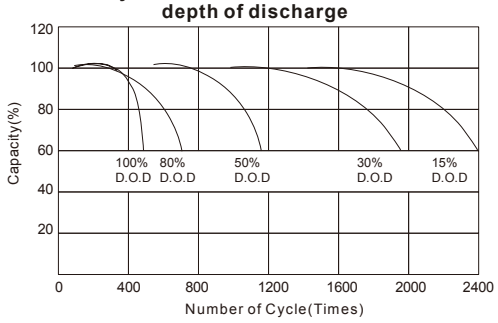
Self-discharge characteristic



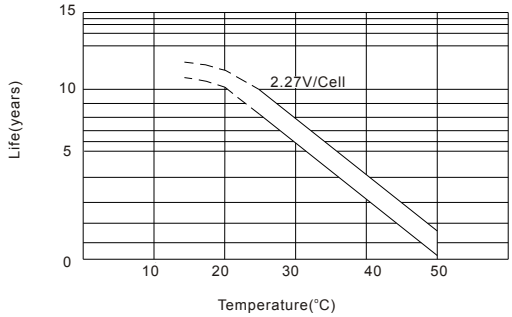
Life characteristics of standby use



Cycle service life in relation to depth of discharge



Temperature effects on float life



Temperature effects on capacity