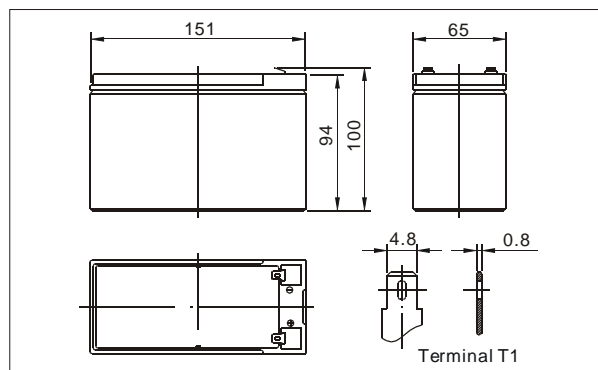


**Outer dimensions (mm)**


TianChang sealed lead-acid rechargeable battery (VRLA battery) is leak-proof and maintenance free. The Superiority of VRLA battery is derived from its uniquely efficient oxygen recombination technology. The oxygen evolved from the positive plates diffuses through the micro porous glass fiber mat to the negative plates where it is changed back to water by recombination reaction, eliminating the need for water addition. The result is a maintenance free battery.

**Battery Construction**

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

**General Features**

- Absorbent Glass Mat (AGM) technology for efficient 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.

**Application**

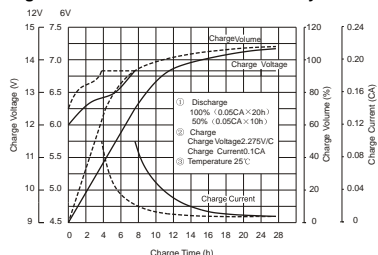
- Electric powered vehicles
- Golf cars and buggies
- PDA equipment as laptop computer,
- Camera, phone sets, medical sets
- Power tools, Lawn mowers, vacuum cleaners
- Electric Powered Toys
- Wheel Chairs

**Specifications**

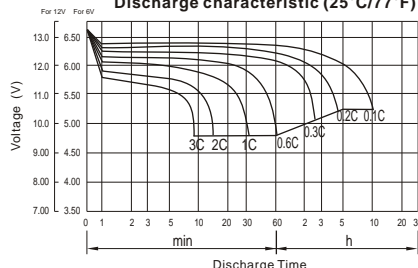
Nominal Voltage		12V
Capacity (20 hr 25°C)		8Ah
Design Life		5 Years
Dimensions	Length	151 mm (5.94 inch)
	Width	65 mm (2.56 inch)
	Height	94 mm (3.70 inch)
	Total Height	100 mm (3.94 inch)
Approx. Weight		2.4 Kg
Capacity 25°C (77°F)	20 hr rate	8Ah
	10 hr rate	7.44Ah
	3 hr rate	6.80Ah
	1 hr rate	4.80Ah
Internal Resistance (Full charged Battery at 25°C (77°F))		20 mΩ

Capacity affected by Temperature (20hr)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-Discharge at 25°C	3 month	Remaining capacity: 91%
	6 month	Remaining capacity: 82%
	12 month	Remaining capacity: 65%
Normal operating temperature		25°C ± 3°C (77°F ± 5°F)
Operating temperature range		-15°C ~ 50°C (5 ~ 122°F)
Float charging voltage (25°C)		13.6 to 13.8V
Cyclic charging voltage (25°C)		14.5 to 14.9V
Maximum charging current		3.2A
Terminal material		Copper
Maximum Discharge current		120A (5sec)

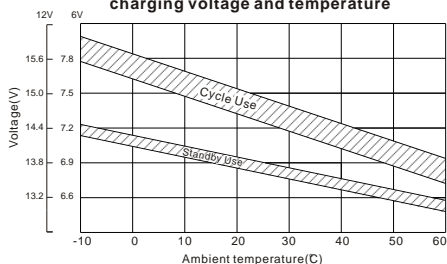
**Charge characteristic Curve for standby use**



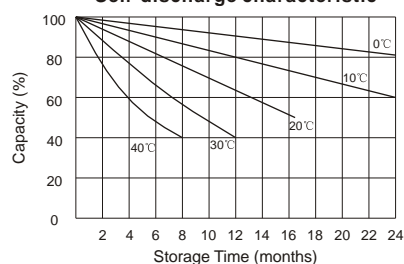
**Discharge characteristic (25°C/77°F)**



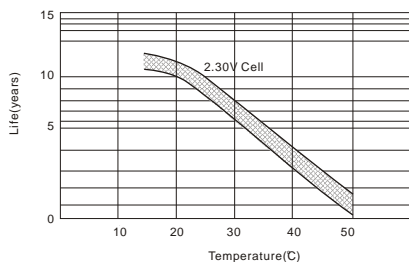
**Relationship between charging voltage and temperature**



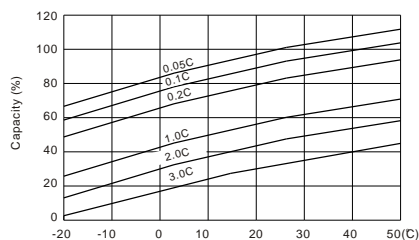
**Self-discharge characteristic**



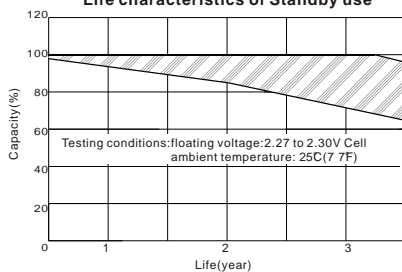
**Temperature effects on float life**



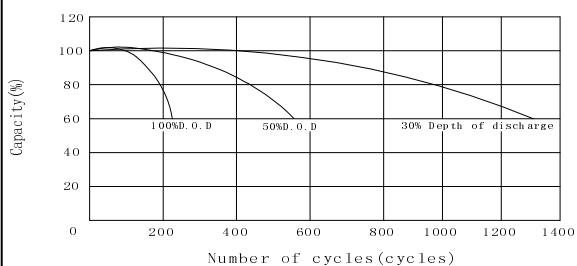
**Temperature effects on capacity**



**Life characteristics of Standby use**



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



**Discharge Constant Current (Amperes at 77°F25°C)**

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	32.0	22.0	16.0	9.35	5.50	2.18	1.41	0.77	0.42
1.65V	31.3	21.5	15.6	9.15	5.43	2.14	1.38	0.77	0.42
1.70V	28.6	20.9	15.2	8.92	5.31	2.10	1.36	0.77	0.42
1.75V	28.0	20.1	13.7	8.60	5.18	2.05	1.34	0.76	0.40
1.80V	27.2	19.3	13.0	8.25	5.02	2.00	1.32	0.76	0.40

**Discharge Constant Power (Watts at 77°F25°C)**

End Point Volts/Cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	68.3	42.7	31.7	18.2	13.8	11.0	6.00	4.09	2.78
1.65V	64.8	42.2	31.0	17.8	13.5	10.7	5.93	4.05	2.76
1.70V	61.4	40.8	30.1	17.4	13.0	10.4	5.80	3.97	2.73
1.75V	58.0	39.3	29.2	16.5	12.3	9.9	5.66	3.85	2.70
1.80V	52.6	37.5	27.4	15.4	11.6	9.3	5.51	3.70	2.60