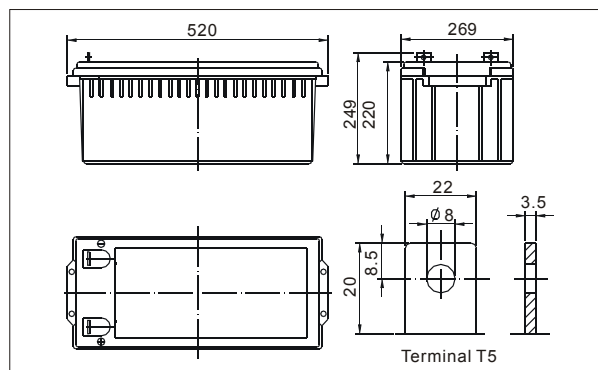


● **Outer dimensions (mm)**



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**

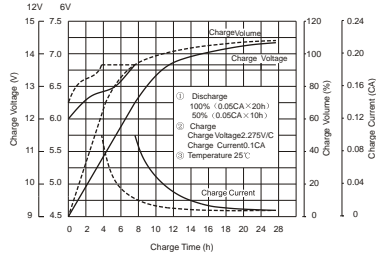
- Alarm System
- Medical Equipment
- Cable Television
- Control Equipment
- UPS
- Communication Equipment
- Toys
- Emergency power System
- Power Tools
- Security System

● **Specifications**

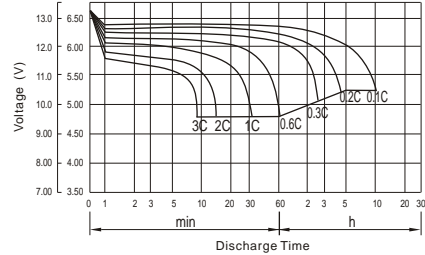
Nominal Voltage		12V
Capacity (10 hr 25°C)		250Ah
Design Life		10 Years
Dimensions	Length	520 mm (20.47inch)
	Width	269 mm (10.59 inch)
	Height	220 mm (8.66 inch)
	Total Height	249 mm (9.80 inch)
Approx. Weight		70 Kg
Capacity 25°C (77°F)	10 hr rate	250Ah
	3 hr rate	200Ah
	1 hr rate	162.5Ah
Internal Resistance (Full charged Battery at 25°C (77°F))		2.6m Ω

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)		13.60 to 13.80V
Cyclic charging voltage (25°C)		14.50 to 14.90V
Maximum charging current		75A
Terminal material		Copper
Maximum Discharge current		2000A (5sec)

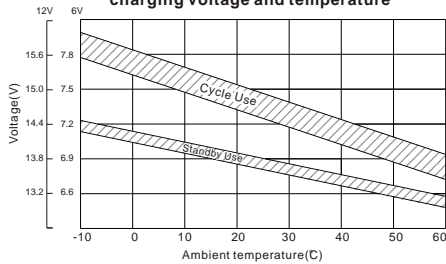
Charge characteristic Curve for standby use



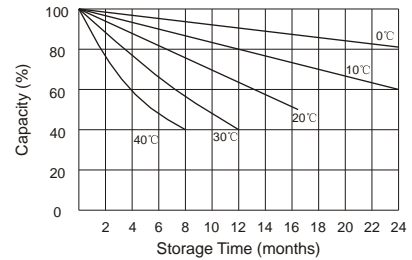
Discharge characteristic (25°C/77°F)



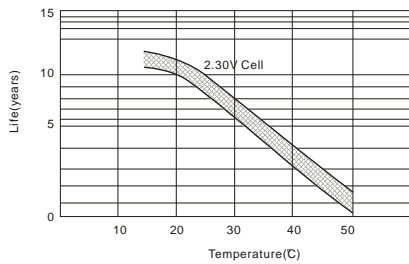
Relationship between charging voltage and temperature



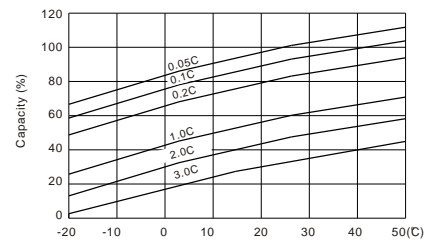
Self-discharge characteristic



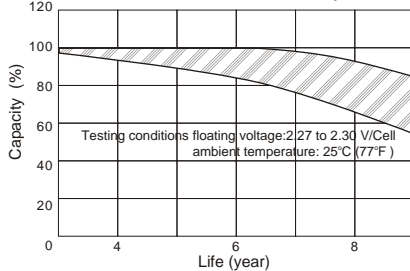
Temperature effects on float life



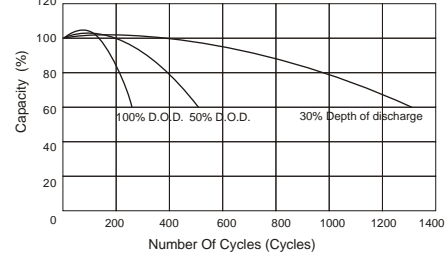
Temperature effects on capacity



Life characteristics of Standby use



Cycle service life in relation to depth of discharge



Discharge Constant Current (Amperes at 77°F/25°C)

F.V./Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	654.1	490.0	413.6	262.3	156.0	93.35	64.52	52.88	43.28	29.81	25.21	13.86
10.0V	635.2	466.2	405.1	258.0	155.3	92.64	64.27	52.63	43.03	29.57	24.96	13.61
10.2V	616.4	449.8	398.8	255.7	153.8	91.94	63.78	52.39	42.77	29.33	24.72	13.36
10.5V	553.5	415.0	379.7	249.3	152.4	91.24	63.53	51.90	42.26	29.09	24.48	13.11
10.8V	499.6	378.5	350.0	238.3	148.8	89.60	61.80	50.67	41.50	28.60	24.24	12.86
11.1V	426.6	338.2	313.9	223.3	141.4	85.63	59.08	48.23	39.72	27.39	23.51	12.10

Discharge Constant Power (Watts at 77°F/25°C)

F.V./Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.6V	6766	5218	4550	2990	1803	1100	768	630	516	356	301	166
10.0V	6633	5059	4477	2954	1798	1094	768	629	515	354	299	163
10.2V	6557	4925	4426	2933	1784	1088	765	628	513	352	297	160
10.5V	5969	4586	4222	2864	1768	1080	762	622	507	349	294	157
10.8V	5437	4228	3902	2746	1736	1066	741	608	498	343	291	154
11.1V	4775	3822	3513	2579	1661	1027	709	579	477	329	282	145

(Note) The above characteristics data are average values.