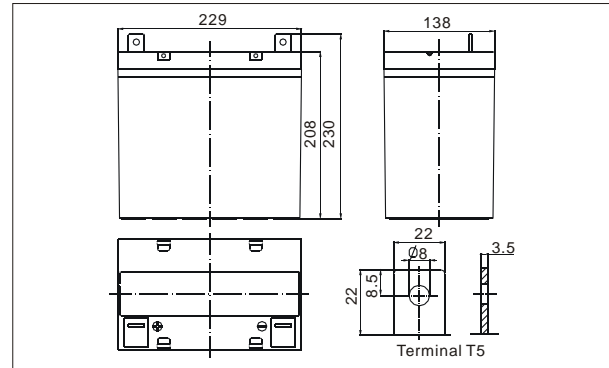


**Outer dimensions (mm)**


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**

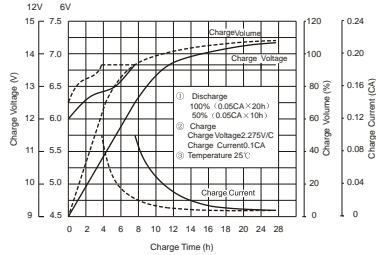
- Electric powered vehicles
- Golf cars and buggies
- PDA equipment as laptop computer,
- Camera, phone sets, medical sets
- Power tools, Lawn mowers, vacuum cleaners
- Electric Powered Toys
- Wheel Chairs

**Specifications**

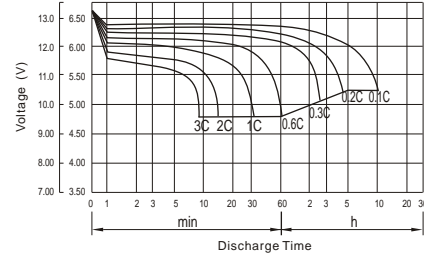
Nominal Voltage	12V	
Capacity (10 hr 25°C)	55Ah	
Design Life	10 Years	
Dimensions	Length	229 mm (9.02 inch)
	Width	138 mm (5.43 inch)
	Height	208 mm (8.19 inch)
	Total Height	230 mm (9.06 inch)
Approx. Weight	17.0 Kg	
Capacity 25°C (77°F)	10 hr rate	55Ah
	3 hr rate	44Ah
	1 hr rate	35.75Ah
Internal Resistance (Full charged Battery at 25°C (77°F))	6.0 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	16.5A	
Terminal material	Copper	
Maximum Discharge current	550A (5sec)	

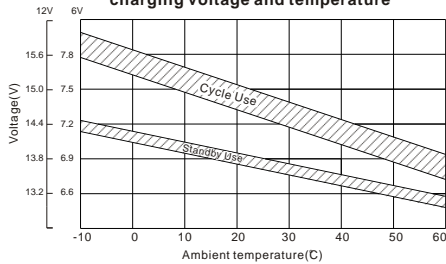
**Charge characteristic Curve for standby use**



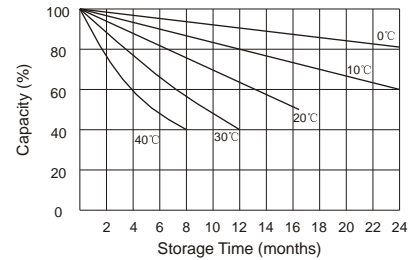
**Discharge characteristic (25°C/77°F)**



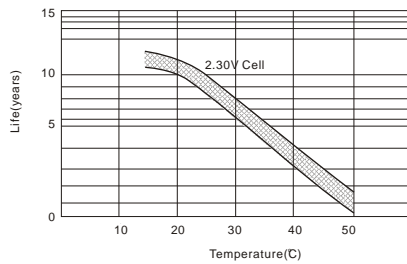
**Relationship between charging voltage and temperature**



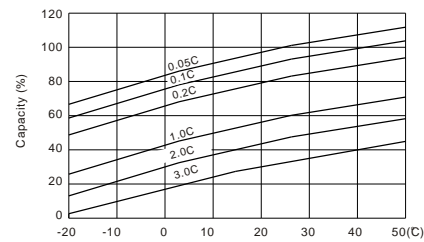
**Self-discharge characteristic**



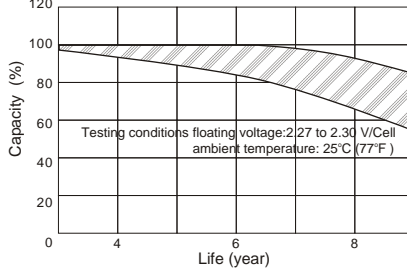
**Temperature effects on float life**



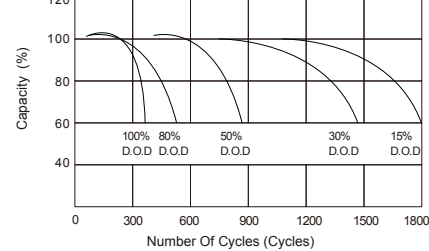
**Temperature effects on capacity**



**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	184.3	135.7	105.8	64.46	35.75	21.38	14.76	12.23	10.30	7.033	5.833	3.113
10.0V	179.0	129.1	103.6	63.34	35.59	21.22	14.71	12.17	10.24	6.976	5.777	3.056
10.2V	173.7	124.5	101.97	62.17	35.26	21.06	14.59	12.12	10.17	6.919	5.721	2.999
10.5V	155.9	114.9	97.09	61.70	34.93	20.90	14.54	12.00	10.05	6.861	5.665	2.943
10.8V	140.7	104.8	89.50	60.65	34.10	20.52	14.14	11.72	9.872	6.747	5.609	2.886
11.1V	120.2	93.7	80.28	56.78	32.40	19.61	13.52	11.15	9.448	6.461	5.441	2.716

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

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
9.60V	1944	1445	1153	723.3	413.1	252.0	175.7	145.8	122.8	83.97	69.71	37.32
10.0V	1906	1401	1135	714.4	412.1	250.7	175.7	145.6	122.5	83.57	69.27	36.67
10.2V	1884	1364	1122	709.4	408.9	249.1	175.0	145.3	122.1	83.02	68.65	35.99
10.5V	1715	1270	1070	704.5	405.3	247.3	174.3	143.9	120.6	82.34	67.98	35.31
10.8V	1562	1171	989.0	693.2	397.8	244.2	169.6	140.6	118.5	80.96	67.31	34.63
11.1V	1372	1058	890.3	652.9	380.8	235.1	162.2	133.8	113.38	77.53	65.29	32.60

(Note) The above characteristics data are average values.