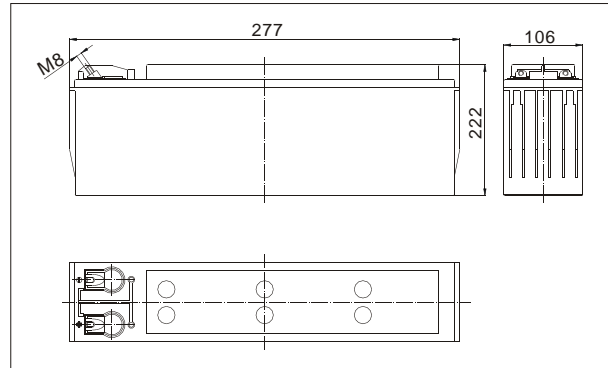




● **Outer dimensions (mm)**



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**

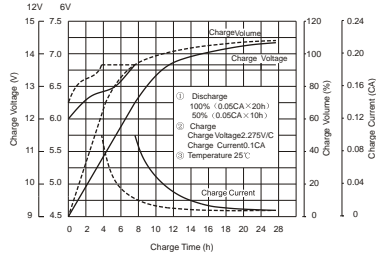
- Alarm System
- Medical Equipment
- Cable Television
- Control Equipment
- UPS
- Communication Equipment
- Toys
- Emergency power System
- Power Tools
- Security System

● **Specifications**

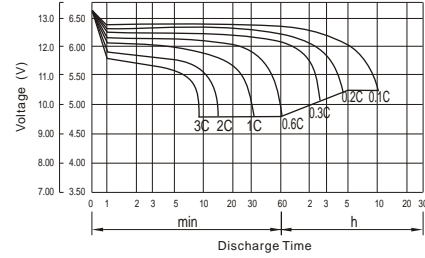
Nominal Voltage		12V
Capacity (10 hr 25°C)		55Ah
Design Life		12 Years
Dimensions	Length	277 mm (10.90 inch)
	Width	106 mm (4.17 inch)
	Height	222 mm (8.74 inch)
	Total Height	222 mm (8.74 inch)
Approx. Weight		17 Kg
Capacity 25°C (77°F)	10 hr rate	55Ah
	3 hr rate	44Ah
	1 hr rate	35.75Ah
Internal Resistance (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)

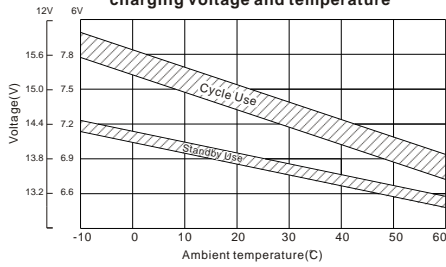
Charge characteristic Curve for standby use



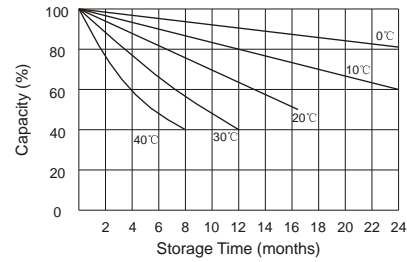
Discharge characteristic (25°C/77°F)



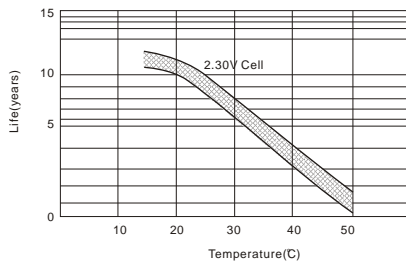
Relationship between charging voltage and temperature



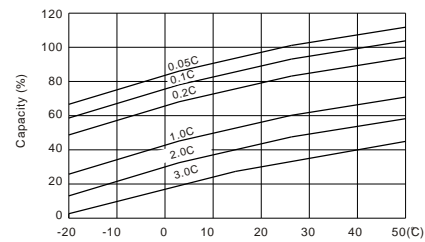
Self-discharge characteristic



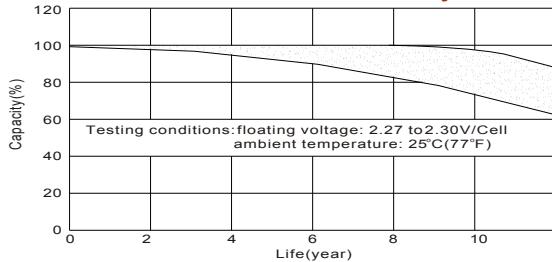
Temperature effects on float life



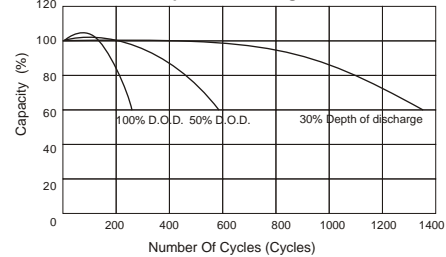
Temperature effects on capacity



Life characteristics of standby use



Cycle service life in relation to depth of discharge



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

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1. 60V	172	130	98.0	58.2	35.2	14.5	9.98	5.69	2.98
1. 65V	162	123	94.0	56.5	34.4	14.3	9.88	5.65	2.97
1. 70V	152	115	89.5	54.5	33.6	14.0	9.75	5.60	2.95
1. 75V	141	108	84.4	52.9	32.7	13.7	9.60	5.55	2.93
1. 80V	128	100	50.5	51.0	31.6	13.4	9.43	5.50	2.90

Discharge Constant Power (watts at 77° F 25 °C)

End Point Volts/Cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1. 60V	330	247	191	115	88.4	71.4	42.5	30.1	19.4
1. 65V	310	233	183	113	87.1	69.8	41.7	29.5	19.3
1. 70V	291	220	176	111	85.3	68.2	40.8	28.9	18.8
1. 75V	271	207	168	109	83.4	66.6	39.8	28.3	18.7
1. 80V	257	192	159	107	81.2	64.9	38.8	27.7	18.5