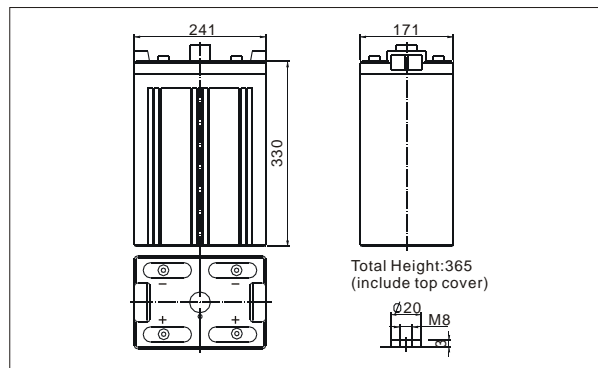


● Outer dimensions (mm)



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

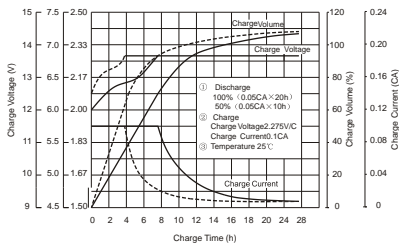
- Medical Equipment
- Cable Television
- Control Equipment
- UPS
- Communication Equipment
- Emergency power System
- Security System

● Specifications

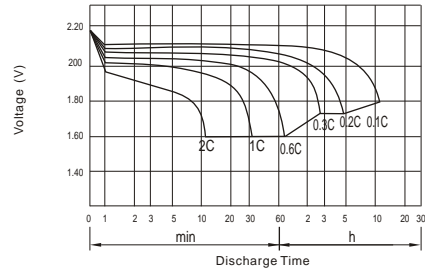
Nominal Voltage		2V
Capacity (10 hr 25°C)		500Ah
Design Life		20 Years
Dimensions	Length	241 mm (9.49 inch)
	Width	171 mm (6.37 inch)
	Height	330 mm (12.99 inch)
	Total Height	365 mm (14.37 inch)
Approx. Weight		31 Kg
Capacity 25°C (77°F)	10 hr rate	500Ah
	3 hr rate	400Ah
	1 hr rate	325Ah
Internal Resistance (Full charged Battery at 25°C (77°F))		0.4m 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)		2.27 to 2.30V
Cyclic charging voltage (25°C)		2.42 to 2.48V
Maximum charging current		100A
Terminal material		Copper
Maximum Discharge current		3500A (5sec)

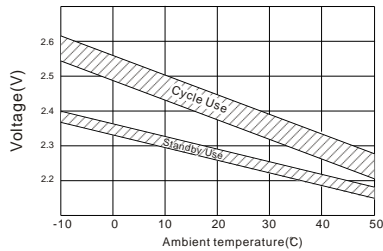
Charge characteristic Curve for standby use



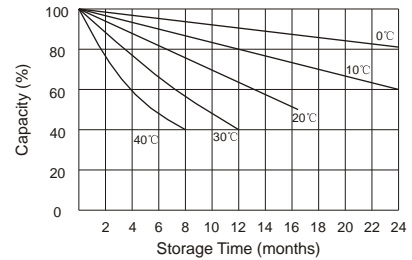
Discharge characteristic (25°C/77°F)



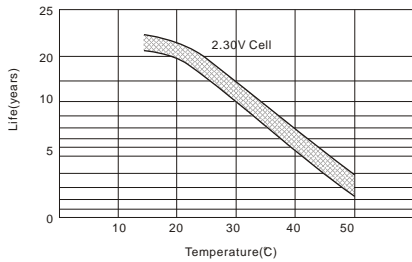
Relationship between charging voltage and temperature



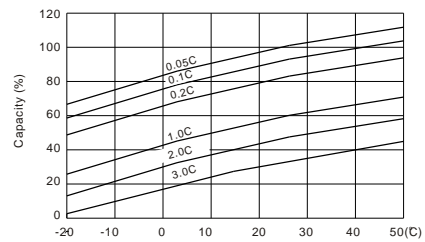
Self-discharge characteristic



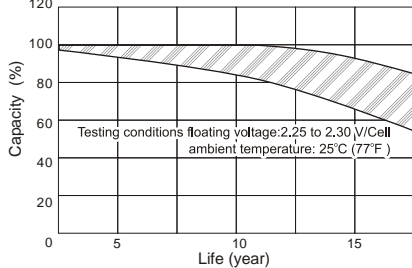
Temperature effects on float life



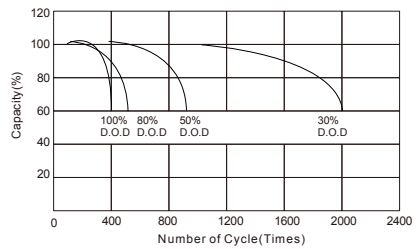
Temperature effects on capacity



Life characteristics of Standby use



Battery Cycle life Vs. Depth of Discharge(DOD)



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

F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	678.9	500.7	322.2	191.5	142.6	113.7	95.76	80.43	64.92	54.26
1.65V	645.5	480.7	308.2	184.5	136.7	109.7	91.77	78.49	62.02	53.33
1.70V	601.9	453.2	302.2	181.5	133.7	108.7	90.77	76.55	61.05	52.36
1.75V	534.4	407.8	278.3	171.6	126.7	102.7	86.78	72.68	59.11	51.39
1.80V	460.0	371.5	262.3	163.6	121.7	101.7	83.79	71.71	58.14	50.42
1.85V	389.0	334.4	242.4	154.6	115.7	93.77	79.80	67.83	55.23	47.01

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

F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	6HR	8HR	10HR
1.60V	1188	912.4	589.9	354.8	265.8	213.7	181.0	155.2	123.5	104.8
1.65V	1157	907.5	587.9	349.7	260.6	210.5	178.9	153.2	122.5	103.8
1.70V	1093	858.9	577.2	344.6	256.6	209.7	177.3	149.6	120.6	102.2
1.75V	974	774.0	531.7	326.2	247.4	199.2	169.9	142.3	116.8	100.5
1.80V	842.9	706.2	501.4	311.5	237.2	198.3	164.4	140.6	114.9	96.95
1.85V	718.8	636.7	463.4	294.9	226.0	183.6	156.9	133.2	109.2	93.35

(Note) The above characteristics data are average values