



# CA12-2500

(12V250AH)



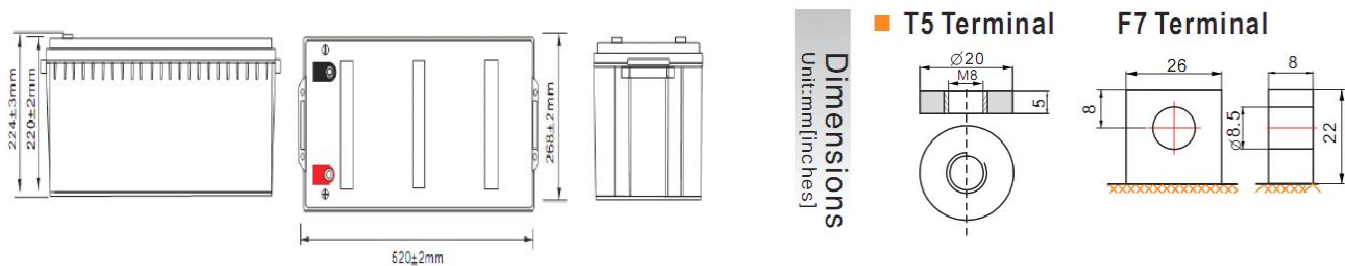
CA(Deep Cycle GEL , 12 Volts ) series is pure GEL battery with 15 years floating design life , it is ideal for standby or frequent cyclic discharge applications under extreme environments. By using strong grids, high purity lead and patented Gel electrolyte, the CA series offers excellent recovery after deep discharge under frequent cyclic discharge use, and can deliver 400 cycles at 100% DOD. Suitable for solar, CATV, marine , RV and deep discharge UPS, communication , and telecommunication , etc



## Specifications:

Cells Per Unit	6
Voltage Per Unit	12
Capacity	250ah @20hrs-rate to 1.75v per cell @25°C/77°F
Approx Weight	75.0kg (Tolerance±1.5% )
Max.Discharge Current	2500A (5sec)
Internal Resistance	Approx 2.5mΩ
Operation Temp.Range	Discharge: -15-50°C (5-122°F)
	Charge: 0-40°C (32-104°F)
	Storage: -15-40°C (5-104°F)
Nominal Operating Temp.Range	25±3°C (77±5°F)
Float Charging Voltage	13.5V-13.8V (25°C/77°F) Coefficient:20mv/°C (No limit on Initial Charging Current)
Recommended Maximum Charging Current	40A
Equalization and Cycle Service	14.4V-14.8V (25°C/77°F) Coefficient:30mv/°C (Initial charging current less than 16.5A)
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using.
Terminal	T5 or F7
Container material	ABS UL94-HB,UL94-V0 Optional

## Dimensions:



## Self Discharge:

KANGLIDA batteries maybe stored for up to 6months at 25°C(77°F) and then a freshing charge is required, for higher temperatures the time interval will be shorter.

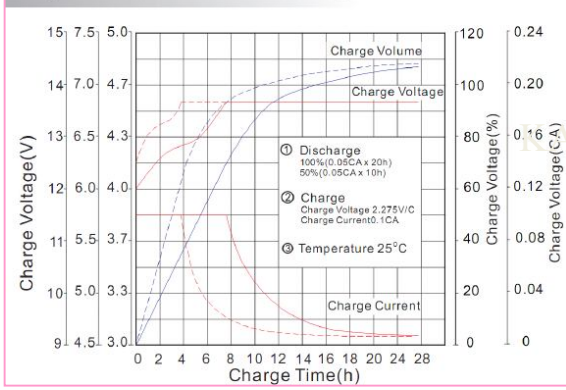
Constant Current Discharge(Amperes at 25°C/77 °F)										
F.V/Time	10min	15min	30min	45min	1h	2h	3h	5h	10h	20h
1.80V/cell	358	292	182	140	114	66.6	50.0	34.4	20.2	10.40
1.70V/cell	420	342	196	150	121	70.4	52.4	35.6	20.6	10.70
1.60V/cell	470	378	216	162	130	74.4	54.8	37.0	21.0	11.00

Constant Power Discharge(Watts per cell at 25°C/77 °F)										
F.V/Time	10min	15min	30min	45min	1h	2h	3h	5h	10h	20h
1.80V/cell	656	554	342	266	222	128.2	97.0	68.0	40.0	20.58
1.70V/cell	740	612	368	286	230	134.8	101.0	69.8	40.6	21.12
1.60V/cell	806	662	400	302	245	140.4	104.8	71.6	41.0	21.64

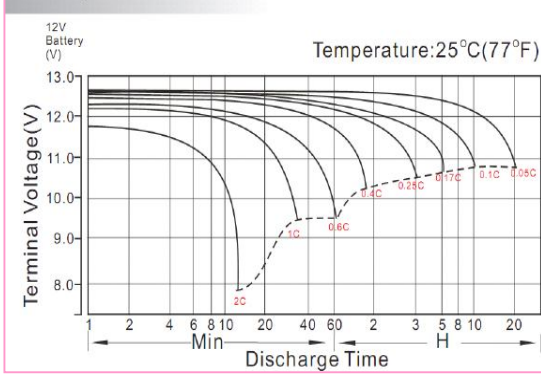
Note: the above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.

# Characteristics:

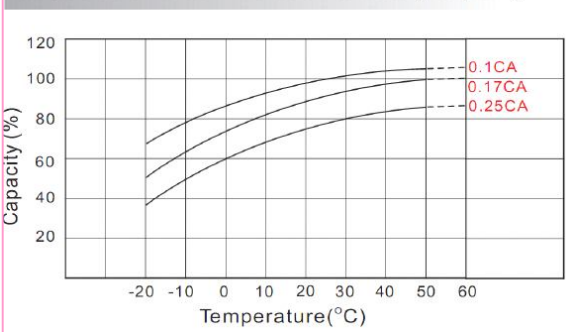
Charge characteristic Curve for standby use



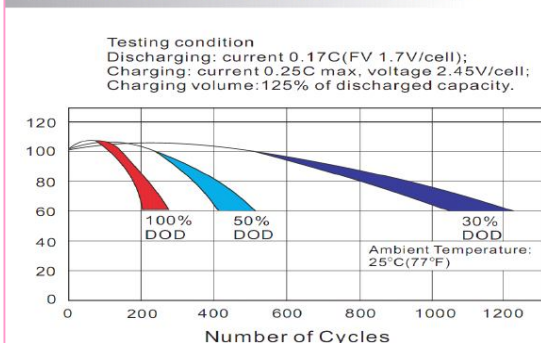
Discharge characteristic Curve



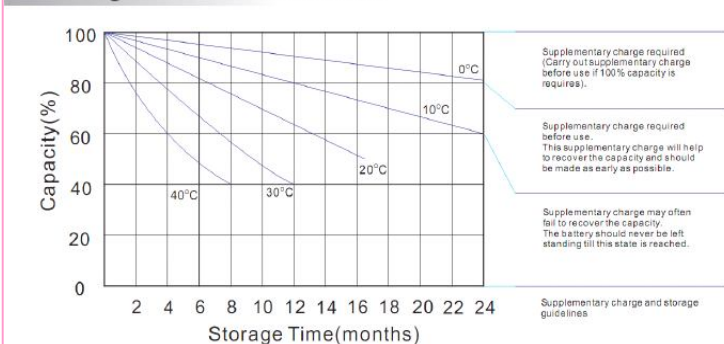
Temperature Effects in Relation to Battery Capacity



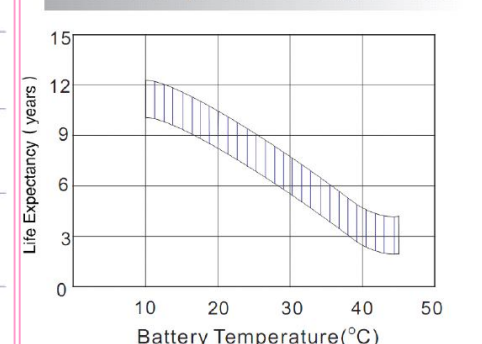
Cycle Life in Relation to Depth of Discharge



## Storage characteristics



Effect of temperature on long term float life



## Capacity Factors With Different Temperature

Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL Battery	6V&12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%
	2V	60%	75%	85%	88%	92%	99%	100%	103%	105%	106%
AGM Battery	6V&12V	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%
	2V	55%	70%	80%	85%	92%	99%	100%	104%	108%	110%

## Discharge Current VS. Discharge Voltage

Final Discharge Voltage V /cell	1.75V	1.70V	1.60V
Discharge Current (A)	(A) ≤ 0.2C	0.2C < (A) < 1.0C	(A) ≥ 1.0C

Charge the batteries at least once every six months, if they are stored at 25°C.

### Charging Method:

Constant Voltage	-0.2Cx2h+2.4-2.45V/cellx24h, Max. Current 0.2C
Constant Current	-0.2Cx2h+0.1Cx12h
Fast	-0.2Cx2h+0.2Cx6h

Bolt	M5	M6	M8
Terminal	F3 F4 F13 F18 T25 T26	F8 F11 F12-1 F15	F5 F9 F10 F12 F14 F16
Torque	6-7N·m	8-10N·m	10-12N·m

## Maintenance & Cautions

Cycle service
✳ Avoid battery over discharge, especially battery series connection use.
✳ Charged with recommend voltage, ensure battery can be full recharged.
In general, recharge capacity should be 1.1-1.15 times discharge capacity.
✳ Effect of temperature on cycle charge voltage: -4mV/°C/Cell.
✳ There are a number of factors that will affect the length of cyclic service.
The most significant are depth of discharge, ambient temperature, discharge rate, and the manner in which the battery is recharged.
Generally speaking, the most important factors is depth of discharge.