CL500 *2V 500Ah(10hr)*

The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

Battery Construction

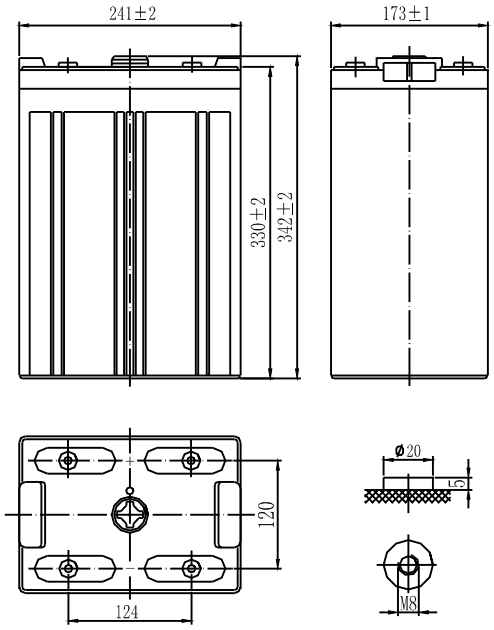
Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

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.

Dimensions and Weight

Length(mm / inch) ..... 242 / 9.53
Width(mm / inch) ..... 173 / 6.81
Height(mm / inch) ..... 330 / 12.99
Total Height(mm / inch) ..... 365 / 14.37
Approx. Weight(Kg / lbs) ..... 33 / 72.8



Performance Characteristics

Nominal Voltage 2V
Number of cell 1
Design Life ..... 20 years
Nominal Capacity 77ºF(25ºC)
  10 hour rate (50A, 1.8V) 500Ah
  5 hour rate (90A, 1.75V) 450Ah
  1 hour rate (300A, 1.6V) 300Ah
Internal Resistance
  Fully Charged battery 77ºF(25ºC) 0.38mOhms
Self-Discharge
  3% of capacity declined per month at 20ºC(average)
Operating Temperature Range
  Discharge ..... -20~60ºC
  Charge ..... -10~60ºC
  Storage ..... -20~60ºC
Max. Discharge Current 77ºF(25ºC) ..... 2500A(5s)
Charge Methods: Constant Voltage Charge 77ºF(25ºC)
  Cycle use 2.35-2.45V
    Maximum charging current 100A
    Temperature compensation ..... -5.0mV/ºC
  Standby use 2.25-2.3V
    Temperature compensation ..... -3.3mV/ºC

Discharge Constant Current (Amperes at 77ºF25ºC)

End Point Volts/Cell	10min	15min	30min	45min	1h	3h	5h	10h
1.60V	937	711	505	383	300	138	96.6	53.9
1.65V	888	677	482	368	290	134	94.7	53.1
1.70V	837	642	460	352	278	129	92.5	52.2
1.75V	785	606	435	335	266	124	90.0	51.2
1.80V	733	570	411	317	253	118	86.5	50.0

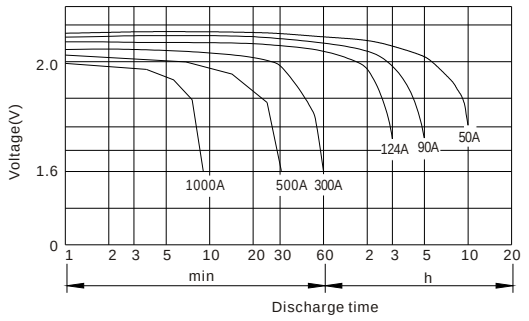
Discharge Constant Power (Watts at 77ºF25ºC)

End Point Volts/Cell	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	1546	1156	930	771	625	378	270	167
1.65V	1457	1094	883	736	599	361	260	164
1.70V	1366	1030	836	699	572	345	247	161
1.75V	1276	967	787	661	543	330	236	157
1.80V	1187	903	738	623	514	304	217	149

(Note)The above characteristics data are average values obtained within three charge/discharge cycles not the mimimum values.

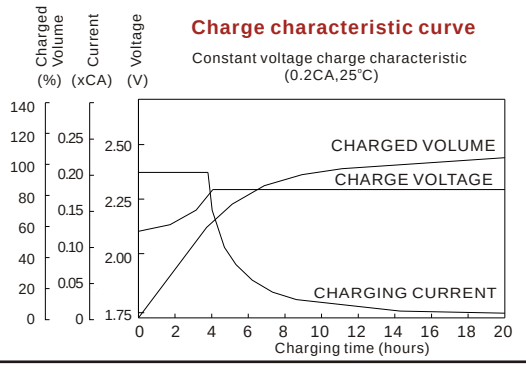
CL500 2V500Ah

Discharge characteristic (25°C)

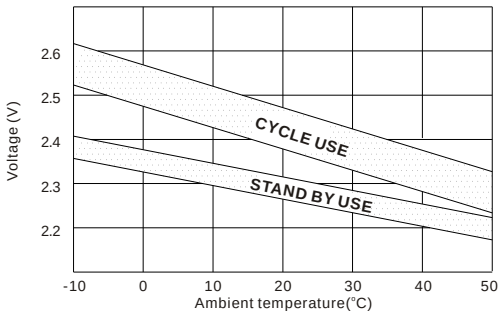


Charge characteristic curve

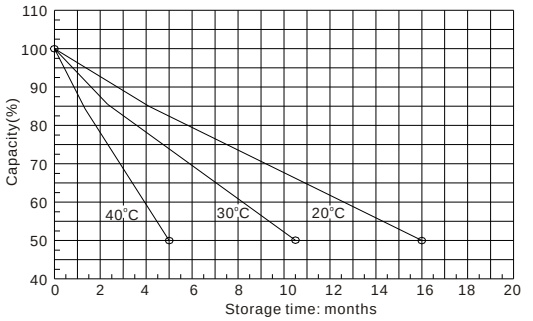
Constant voltage charge characteristic (0.2CA,25°C)



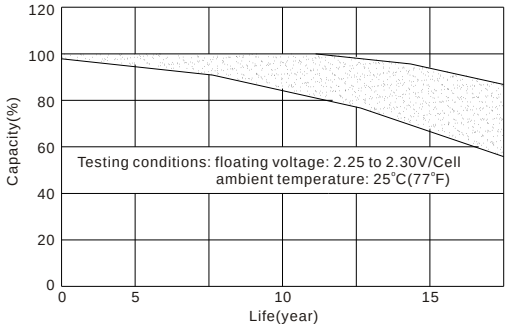
Relationship between charging voltage and temperature



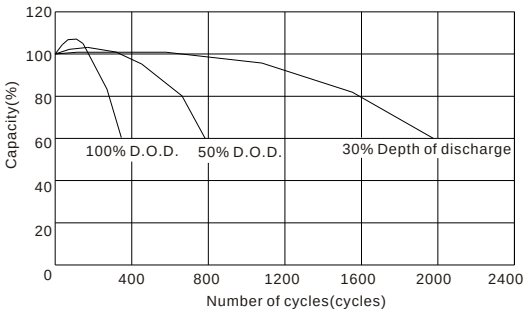
Self-discharge characteristic



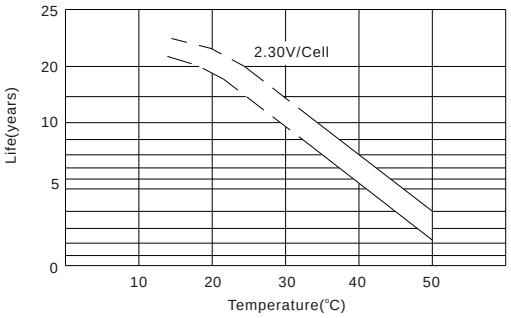
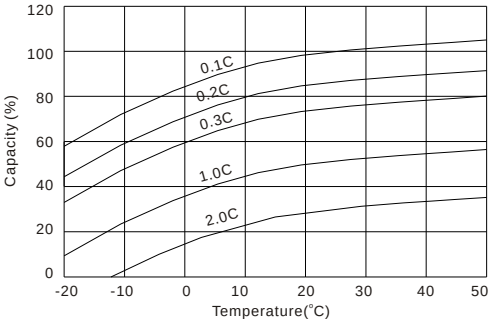
Life characteristics of standby use



Cycle service life in relation to depth of discharge



Temperature effects on float life



Temperature effects on capacity