

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.

GENERAL FEATURES

- I Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- I Computer-aided design, Pb-Ca-Sn alloy grid, suitable for deep cycle discharging with small current.
- I Unique lead paste and technology of coated plate.
- I Long service life, float or cyclic applications.
- I Low self discharge.
- I Case and cover available in both standard and flame retardant ABS.
- I Battery with wires, suitable for solar street lamps application and other energy storage.

Battery Construction

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

TECHNOLOGY PARAMETER

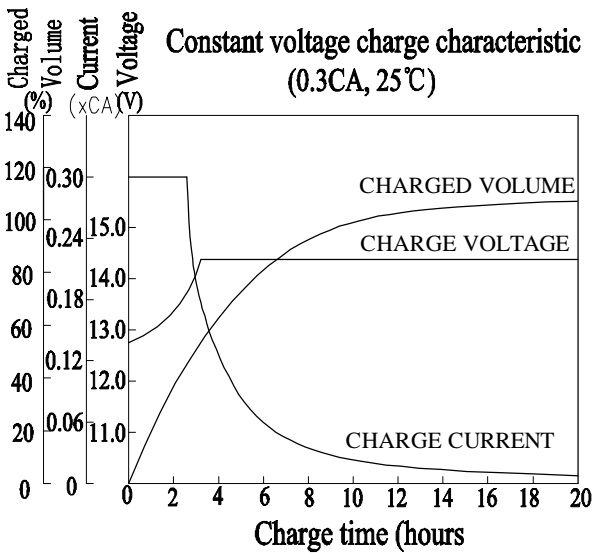
Battery model	CG12-230Z-TA			
Nominal voltage	12 V			
Number of cell	6			
Capacity (25°C)	10HR (23.0A , 10.8 V)	5HR (40.3 A , 10.5 V)	1HR (150A , 9.60 V)	
	230Ah	201.5 Ah	150 Ah	
Dimensions Max.	Length	Width	Height	Total Height
	520±1 mm	269 ±1mm	203±1 mm	203±1 mm
Approx. weight	73.5Kg			
Internal resistance	Full charged at 25°C: $\leq 3.5\text{m}\Omega$			
Self discharge	3% of capacity declined per month at 20°C (average)			
Operating temperature range	Discharge	Charge	Storage	
	-20 ~ 60 °C	-10 ~ 60 °C	-20 ~ 60 °C	
Max. discharge current (25°C)	1100A(5 s)			
Short circuit current	4300 A			

Constant current discharge rating-amperes at 25°C(77 °F)

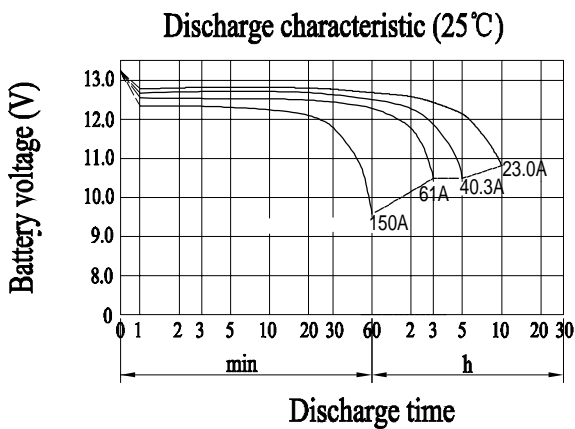
End Point Volts/Cell	1h	3h	5h	6h	8h	10h	20h
1.60V	150	66.5	41.0	37.1	29.0	23.6	12.4
1.65V	147	63.2	40.8	36.0	28.5	23.5	12.3
1.70V	145	62.8	40.6	35.5	28.1	23.4	12.2
1.75V	144	61.0	40.3	34.7	27.6	23.2	12.1
1.80V	142	59.0	40.0	34.0	27.0	23.0	12.0

Constant power discharge rating-watts per cell at 25°C(77 °F)

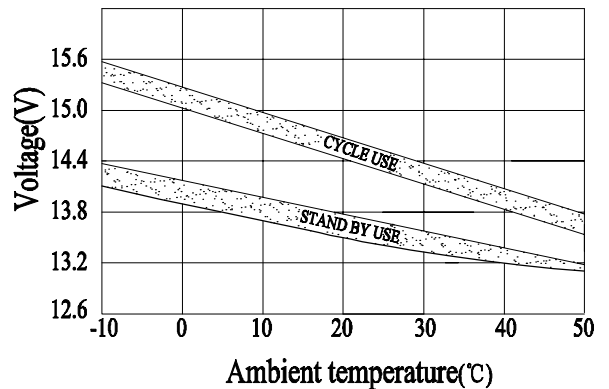
End Point Volts/Cell	1h	2h	3h	5h	6h	8h	10h
1.60V	278	165	125	83.9	72.1	57.0	47.5
1.65V	268	161	122	81.4	70.3	56.2	46.6
1.70V	264	158	121	80.3	69.0	55.5	46.0
1.75V	256	153	117	78.5	67.7	55.0	45.5
1.80V	245	149	114	76.5	66.7	54.1	45.0



CHARGING METHODS: Constant voltage charging at 25
 Standby use: No charging current limit is required
 Charging voltage: 2.20-2.27VPC
 Cyclic use: Maximum charging current: 30% of rated capacity
 Charging voltage: 2.40-2.45VPC
 Temperature compensation :
 stand by -20mV/°C ; cyclic use -30mV/°C

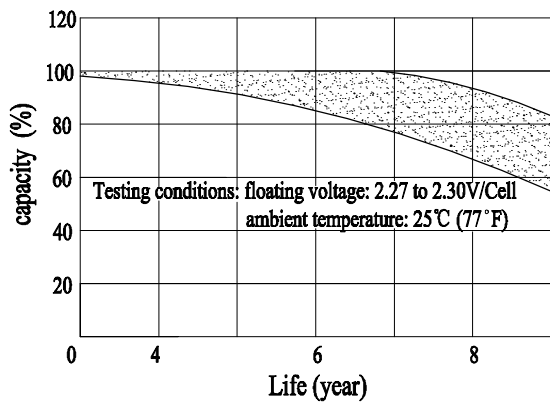


Relationship between charge voltage and temperature

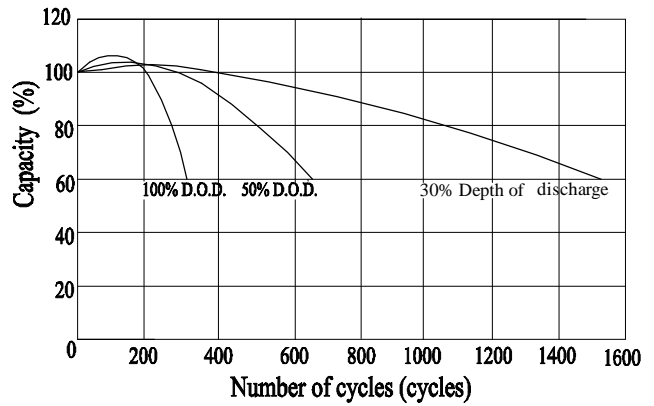


Remarks: the data of constant current/power, inner-resistance, largest discharging current and short-cut current is without wiring data.

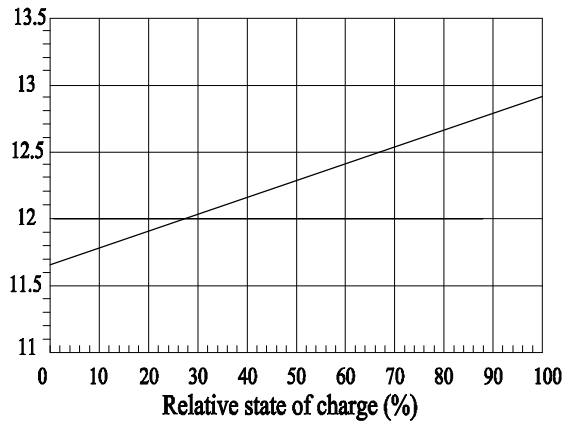
Life characteristics of standby use



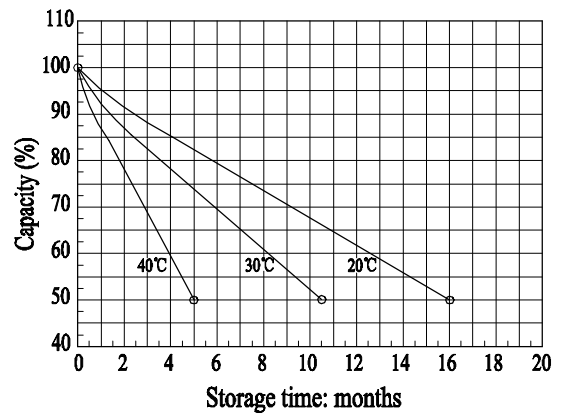
Cycle service life in relation to depth of discharge



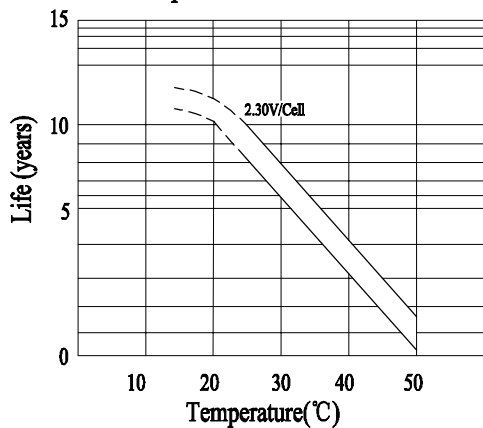
Relationship of OCV and state of charge (25°C)



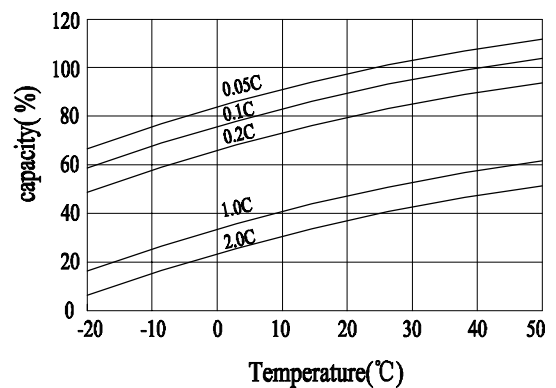
Self-discharge characteristic



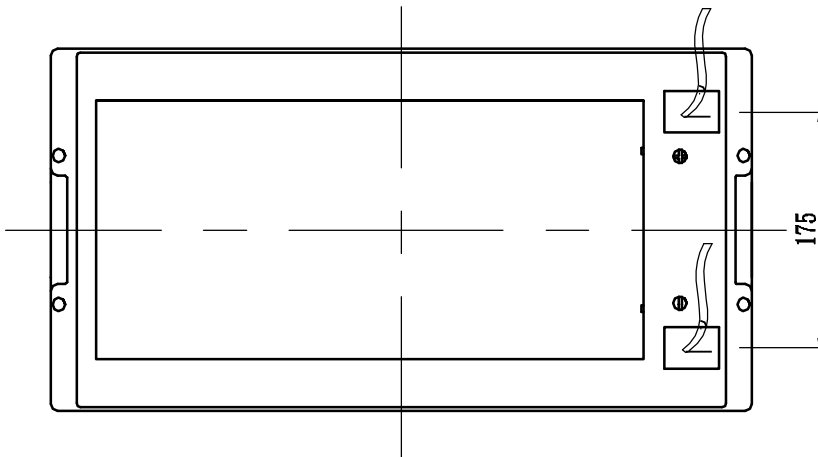
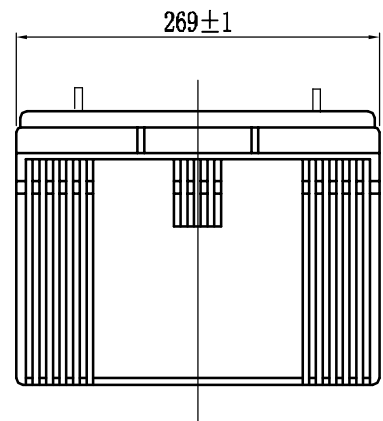
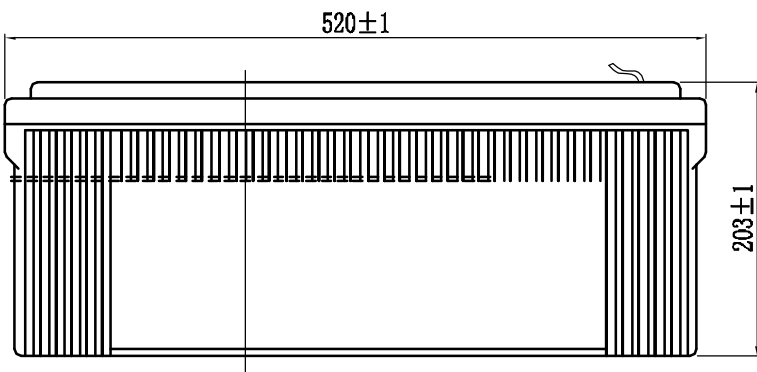
Temperature effects on float life



Temperature effects on capacity



Battery and terminal dimensions



Red ,Black wire terminal
Cross section area:6mm²
Length:3600mm