

## SPECIFICATION: CG12-24XA (12V24Ah)

Gel battery shows some distinctive advantages over flooded battery or AGM battery, such as super thermal stability, high deep discharge capability, good recovery from deep discharge, even if the battery is left discharged for thirty days, it will still recover to 100% of capacity. With the above-mentioned advantages, the gel battery has long service life, is specially suitable for motive power applications, such as golf trailer, scrubber, forklift, etc. The deep discharge cycles increased 50% as compared with the AGM battery.

### GENERAL FEATURES

- l Micro millimeter SiO<sub>2</sub> and H<sub>2</sub>SO<sub>4</sub> gelled electrolyte technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- l Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- l UL-recognized component.
- l Can be mounted in any orientation.
- l Computer designed lead, calcium tin alloy grid for high power density.
- l Long service life, float or cyclic applications.
- l Maintenance-free operation.
- l Low self discharge.
- l Case and cover available in both standard and flame retardant ABS.

### 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	CG12-24XA			
Nominal voltage	12V			
Number of cell	6			
Capacity (25°C)	20hR(1.2A, 10.5V)	10hR(2.36A, 10.5V)	5hR(4.06A, 10.5V)	1hR(15.7A, 9.60V)
	24Ah	23.6Ah	20.3Ah	15.7Ah
Dimensions	Length	Width	Height	Total Height
	166±1mm	175±1mm	125±1mm	125±1mm
Approx. weight	8.1Kg (17.86 lbs) (Weight deviation: ± 3%)			
Internal resistance	Full charged at 25°C: ≤ 12.5mOhms			
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)	300A (5s)			
Short circuit current	1200A			

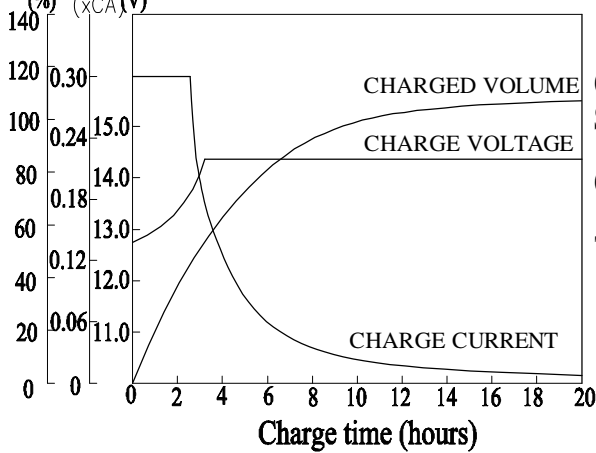
Constant current discharge rating-amperes at 25°C(77°F)

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	91.2	61.8	46.6	27.8	15.7	6.64	4.43	2.49	1.26
1.65V	86.5	58.8	44.5	26.7	15.1	6.43	4.32	2.46	1.25
1.70V	81.5	55.8	42.4	25.5	14.5	6.21	4.20	2.41	1.22
1.75V	76.5	52.6	39.9	24.3	13.9	5.96	4.06	2.36	1.20
1.80V	71.3	49.5	37.9	23.0	13.2	5.69	3.91	2.30	1.17

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

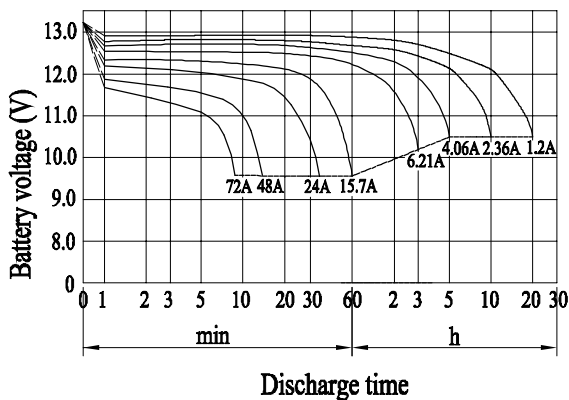
End Point Volts/Cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	178	117	87.3	53.6	39.6	31.1	17.7	13.2	8.81
1.65V	170	112	84.0	51.9	38.3	30.1	17.2	12.9	8.64
1.70V	160	107	80.4	49.9	37.0	29.1	16.6	12.5	8.45
1.75V	152	101	76.1	47.7	35.5	28.0	16.0	12.0	8.23
1.80V	142	95.6	72.7	45.4	33.8	26.8	15.3	11.5	7.96

Constant voltage charge characteristic (0.3CA, 25°C)

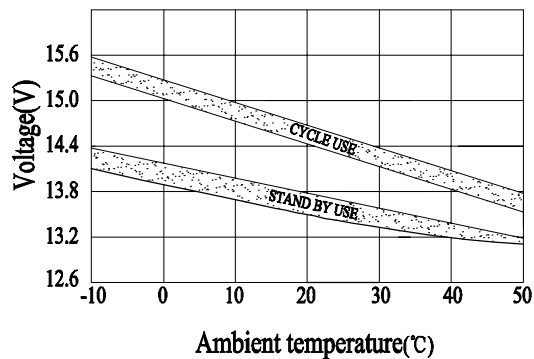


CHARGING METHODS: Constant voltage charging at 25°C  
 Standby use: No charging current limit is required  
 Charging voltage: 2.20-2.30VPC  
 Cyclic use: Maximum charging current: 30% of rated capacity  
 Charging voltage: 2.40-2.45VPC  
 Temperature compensation :  
 stand by -20mV/°C; cyclic use -30mV/°C

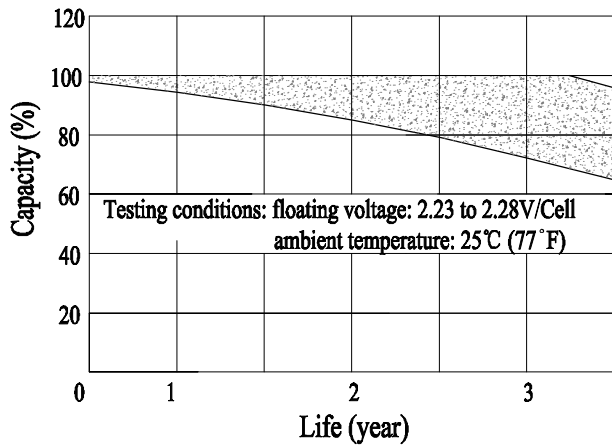
Discharge characteristic (25°C)



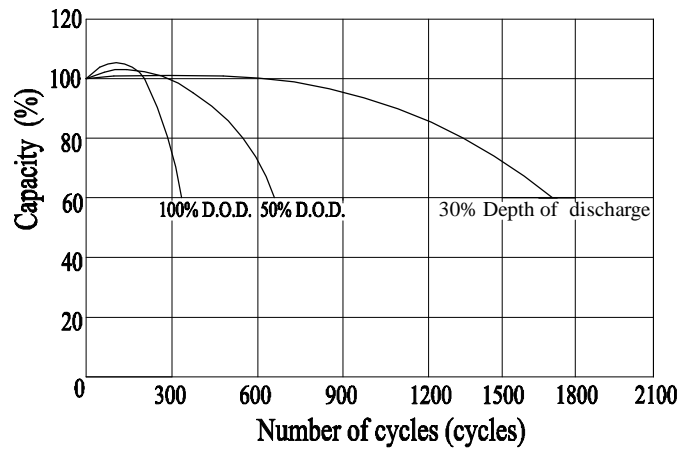
Relationship between charge voltage and temperature



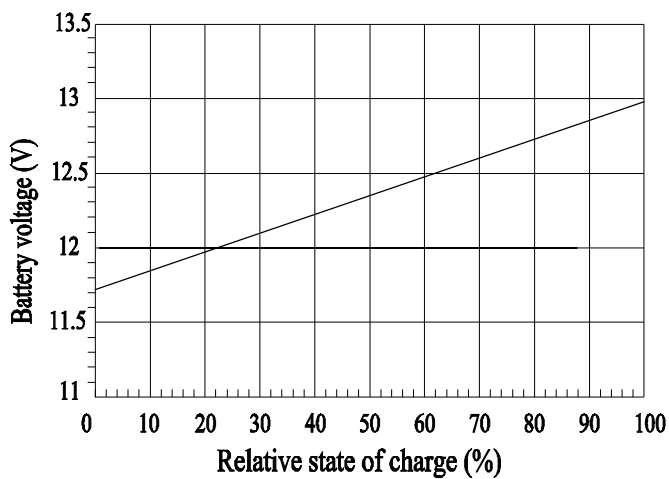
Life characteristics of standby use



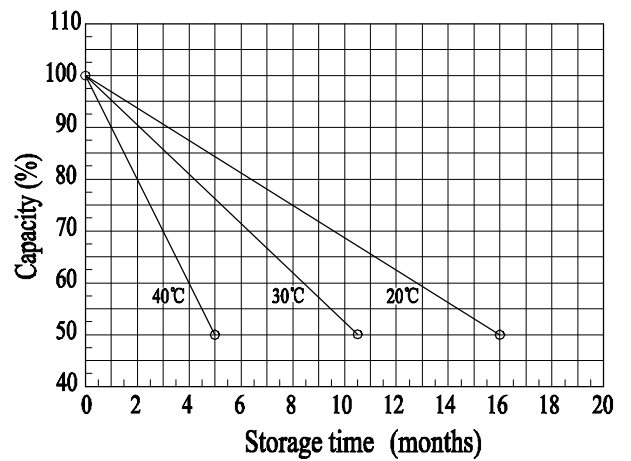
Cycle service life in relation to depth of discharge



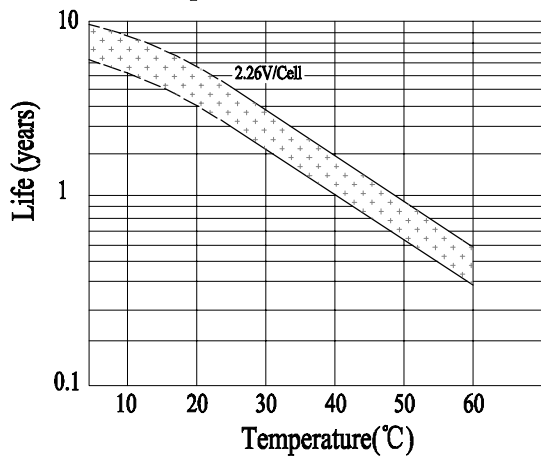
Relationship of OCV and state of charge (25°C)



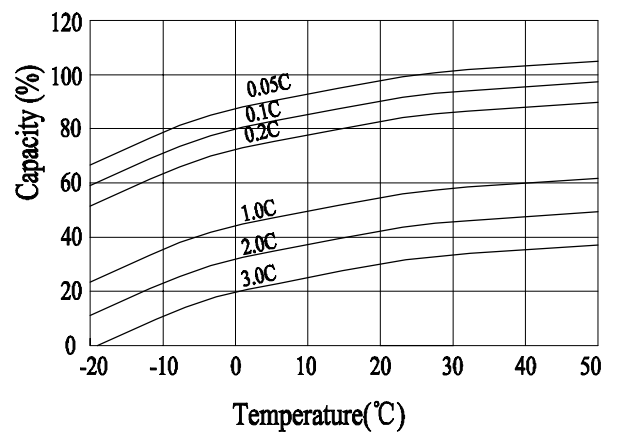
Self-discharge characteristic



Temperature effects on float life



Temperature effects on capacity



Battery and terminal dimensions

