CP1233 12V 3.3Ah (20hr) Sealed Lead Acid (SLA) Battery



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

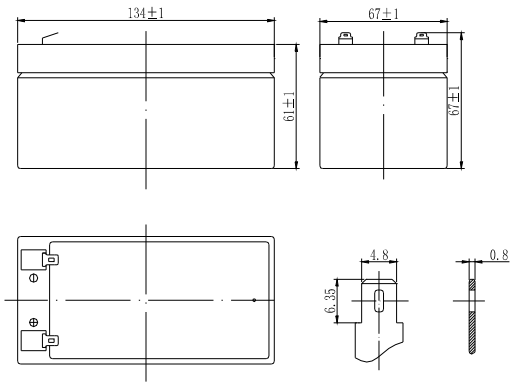
Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

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.
- Valve Regulated Lead Acid (VRLA) battery

Dimensions and Weight

Length(mm / inch)	134 / 5.28
Width(mm / inch)	67 / 2.64
Height(mm / inch)	61 / 2.40
Total Height(mm / inch)	67 / 2.64
Approx. Weight(Kg / lbs)	1.3 / 2.87



terminal F1

Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Design Life	5 years
Nominal Capacity 77ºF (25ºC)	
20 hour rate (0.16A, 10.5V)	0.17Ah
10 hour rate (0.31A, 10.5V)	3.1Ah
5 hour rate (0.56A, 10.5V)	2.8Ah
1 hour rate (2.08A, 9.6V)	2.08Ah
Internal Resistance	
Fully Charged battery 77ºF (25ºC)	42mOhms
Self-Discharge	
3% of capacity declined per month at 20ºC(average)	
Operating Temperature Range	
Discharge	-20~60ºC
Charge	0~50ºC
Storage	-20~60ºC
Max. Discharge Current 77ºF (25ºC)	48A(5s)
Short Circuit Current	160A
Charge Methods: Constant Voltage Charge 77ºF(25ºC)	
Cycle use	14.4-14.8V
Maximum charging current	1.28A
Temperature compensation	-30mV/ºC
Standby use	13.5-13.8V
Temperature compensation	-20mV/ºC

Discharge Constant Current (Amperes at 77ºF25ºC)

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	13.72	9.16	7.04	3.87	2.29	0.85	0.56	0.32	0.19
1.65V	12.79	8.54	6.62	3.82	2.28	0.85	0.56	0.32	0.18
1.70V	12.17	8.28	6.47	3.78	2.26	0.84	0.55	0.32	0.18
1.75V	10.93	7.74	6.13	3.69	2.23	0.84	0.55	0.31	0.17
1.80V	9.79	7.22	5.79	3.61	2.20	0.83	0.55	0.31	0.15

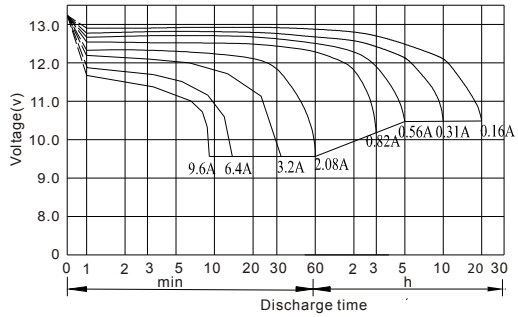
Discharge Constant Power (Watts at 77ºF25ºC)

End Point Volts/Cell	5min	10min	15min	30min	1h	2h	3h	5h	10h
1.60V	26.4	17.12	13.92	7.74	4.58	2.74	1.69	1.31	0.64
1.65V	24.75	16.50	13.20	7.62	4.57	2.72	1.68	1.30	0.64
1.70V	24.23	15.98	12.89	7.57	4.56	2.72	1.68	1.30	0.63
1.75V	21.97	15.37	12.27	7.38	4.48	2.68	1.67	1.29	0.62
1.80V	19.59	14.33	11.55	7.21	4.40	2.64	1.66	1.29	0.62

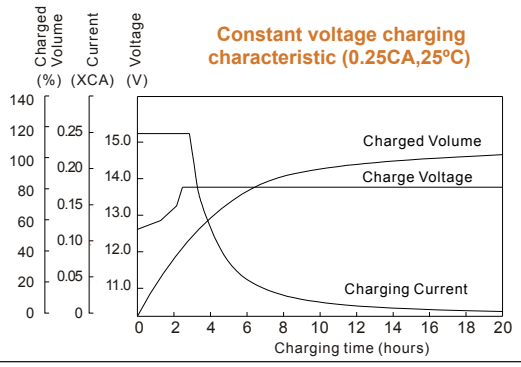
(Note)The above characteristics data are average values obtained within three charge/discharge cycles not the mimimum values.

CP1233 12V 3.3Ah (20hr)

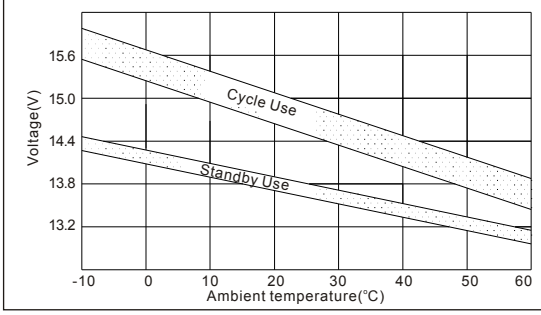
Discharge characteristic (25ºC)



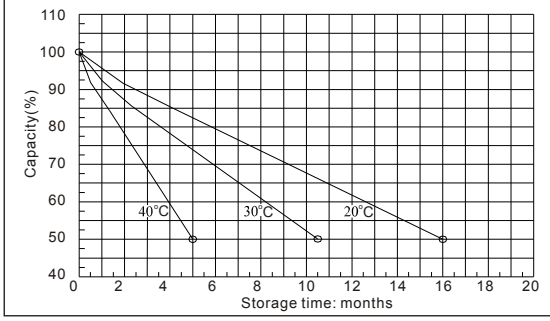
Constant voltage charging characteristic (0.25CA,25ºC)



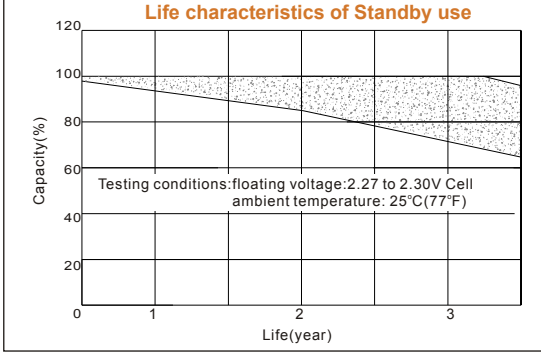
Relationship between charging voltage and temperature



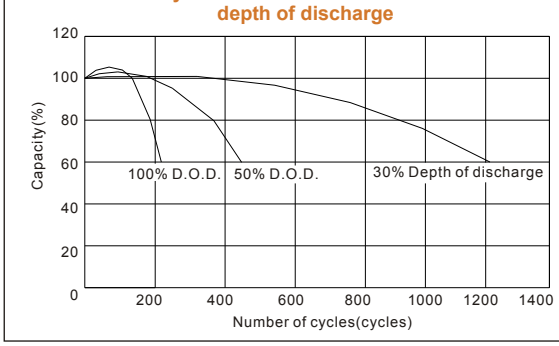
Self-discharge characteristic



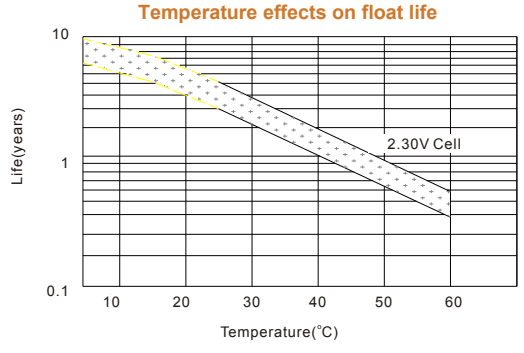
Life characteristics of Standby use



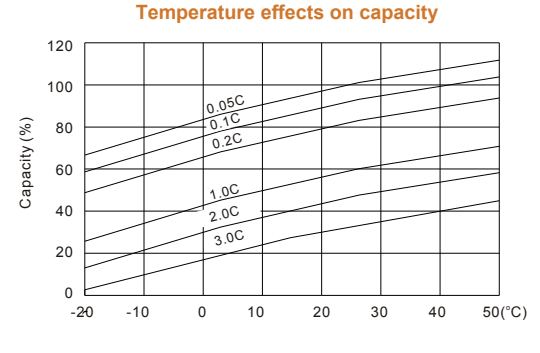
Cycle service life in relation to depth of discharge



Temperature effects on float life



Temperature effects on capacity



DENA ENGINEERING CO.,LTD.
185/1 Wongsawang Road, Wongsawang, Bangsue, Bangkok 10800 THAILAND
Tel. 02-587-7780, 02-910-9600 e-mail: dena@dena.co.th www.dena.co.th