

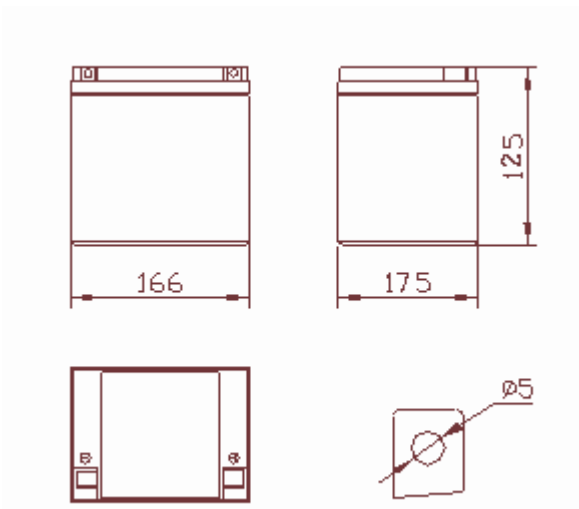


# NP1228 12V28Ah (Standard)

The battery is constructed by plates, separators, safety valves and container.

Since the electrolyte is held by a glassmat separator and plates, the battery can use in any direction and position without leakage.

## Outer Dimensions



## Dimensions and Weight

Length ( mm / inch )	166 / 6.53
Width ( mm / inch )	175 / 6.97
Height ( mm / inch )	125 / 4.96
Total Height ( mm / inch )	125 / 4.96
Approx.Weight( Kg / lbs )	9.0 / 19.8

## Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Design Life	5 years
Nominal Capacity 77°F(25°C)	
20 hour rate(1.40A,10.5V)	28.0Ah
10 hour rate(2.60A,10.5V)	26.0Ah
5 hour rate (4.82A,10.5V)	24.1Ah
1 hour rate(18.2A,9.6V)	18.2Ah
Internal Resistance	
Fully Charged battery 77°F(25°C)	13 mΩ
Self-Discharge	
3% of capacity declined per month at 20°C(average)	
Operation Temperature Range	
Discharge	-20~60°C
Charge	-10~60°C
Storage	-20~60°C
Max.Discharge Current 77°F(25°C)	336A(5s)
Short Circuit Current	420A

## 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

## Charging Methods

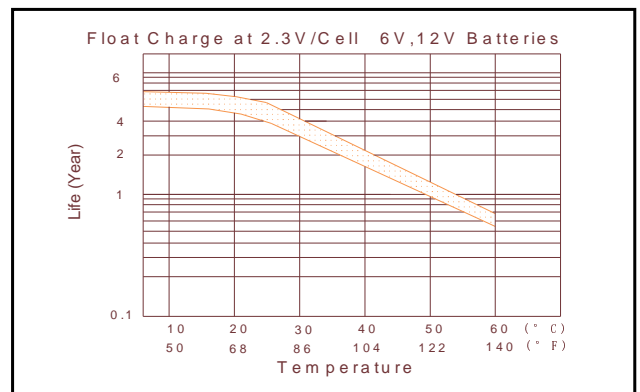
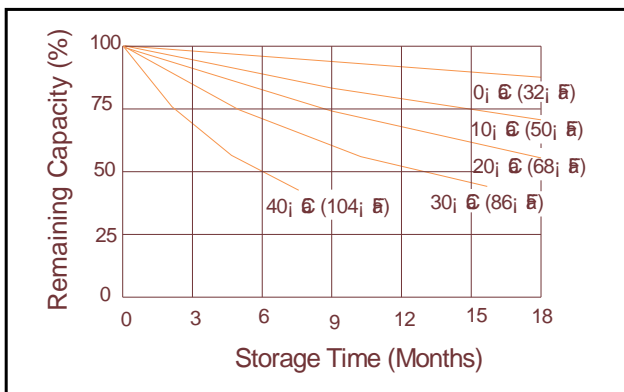
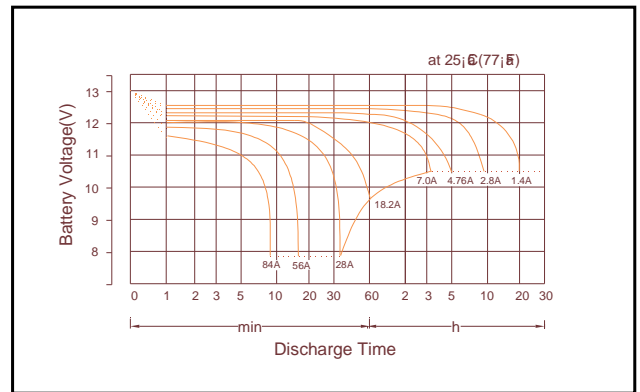
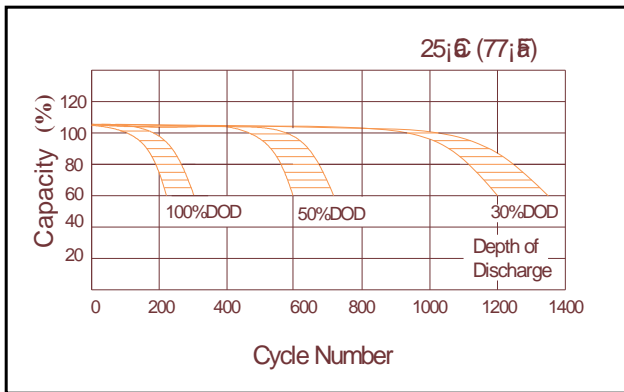
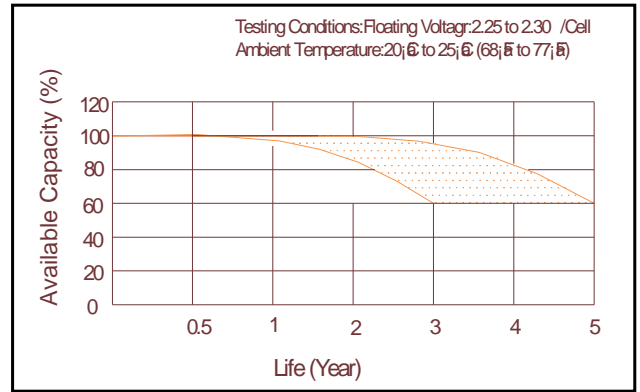
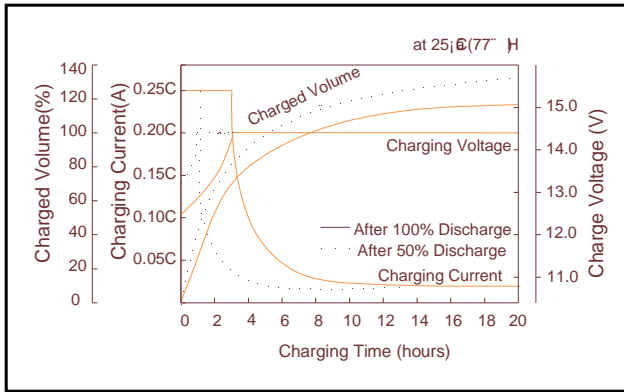
Application	Charging method	Charging Voltage at 25°C	Temperature compensation coefficient of charging voltage	Max.charging current	Charging time 25°C(h)		Temp (°C)
					100% discharge	50% discharge	
For standby power source	Constant voltage & Constant Current Charging (with current restriction)	13.4-13.8V	-18 mV/°C	8.4A	24	20	0~40 (32~104°F)
For cycle service		14.5-15.0V	-30 mV/°C	8.4A	16	10	

\*Temperature compensation of charging voltage is not needed when using the batteries within 15°C to 35°C range.



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**Discharge Constant Current (Amperes at 77°F/25°C)**

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
9.60V	98.0	78.4	56.0	32.3	22.9	18.3	9.80	7.08	4.81	3.16	2.63	1.42
9.90V	95.2	75.6	53.2	31.6	22.6	18.0	9.72	7.05	4.78	3.16	2.63	1.42
10.20V	89.6	70.0	50.4	30.8	22.4	17.9	9.67	7.00	4.76	3.13	2.60	1.40
10.50V	78.4	58.8	47.6	29.1	22.2	17.6	9.52	6.92	4.76	3.10	2.60	1.40
10.80V	70.0	50.4	44.8	25.2	21.9	17.3	9.24	6.72	4.71	3.10	2.54	1.38

**Discharge Constant Power (Watts/cell at 77°F/25°C)**

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
9.60V	1068	858	618	374	262	211	113	82.2	55.7	36.8	30.7	16.8
9.90V	1026	828	585	362	259	206	112	81.6	55.4	36.7	30.5	16.8
10.20V	984	774	557	345	255	206	112	81.6	55.1	36.7	30.5	16.7
10.50V	858	654	526	324	252	203	110	80.4	55.1	36.2	30.2	16.3
10.80V	768	588	496	281	249	200	106	78.0	54.7	36.2	29.8	16.0

