



Neutron Power NP series valve regulated lead acid batteries are designed with AGM (Absorbent Glass Mat) technology and are rechargeable, highly efficient, leak proof and maintenance free.

Applications

List of some of the more common applications for standby or principal power is given below:

- UPS • Telecom Systems • Solar Systems • Cable TV • Electric Wheelchair • Power Station • Marine Equipment • Military Equipment • Golf Car • Electric Fork • Emergency Power System • Railway System

Performance Characteristics			
General Information	Length	90mm (3.54 inch)	
	Width	70mm (2.76 inch)	
	Height	101mm (3.98 inch)	
	Total Height	107mm (4.21 inch)	
	Approx Weight	1.8 Kg	
	Nominal Voltage	12 Volt	
	Number of Cells	6	
	Nominal Capacity (20 hour rate)	5.0 Ah	
	Design Life	3 ~ 5 Years	
	Terminal	F1	
Casing Material	Standard	ABS	
	Optional - V0 Class Flame Retardant	ABS	
Nominal Capacity 77°F (25°C)	20 hour rate	(0.25A, 10.5V)	5.0 Ah
	10 hour rate	(0.47A, 10.5V)	4.7 Ah
	5 hour rate	(0.85A, 10.5V)	4.25 Ah
	1 hour rate	(3.25A, 9.60V)	3.25 Ah
Internal Resistance	Fully Charged Battery 77°F (25°C) ≤ 42 mOhms		
Self Discharge	3% of capacity declined per month at 20°C (average)		
Operating Temperature Range	Discharge		-20 ~ 60°C
	Charge		-10 ~ 60°C
	Storage		-20 ~ 60°C
Max. Discharge 77°F (25°C)	75A (5s)		
Short Circuit Current	250A		
Charge Methods	Constant Voltage Charge 77°F (25°C)		
	Cycle use 2.40 - 2.45VPC		
	Standby use 2.20 - 2.30VPC		
	Temperature compensation -20mV/°C		
	Maximum charging current 2.0A		
Battery Certification			
	ISO14001	ISO9001	TB09075935
			MH418127

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

Outer Dimension

Terminal: F1

The diagram illustrates the outer dimensions of the battery and the dimensions of terminal F1.

- Terminal F1:** A cross-sectional view of the terminal. Dimensions shown are: height 4.7, width 5.5, and thickness 0.72.
- Outer Dimensions:** The battery is shown in three views. The first view shows the top surface with dimensions 101±1.5 and 107±2. The second view shows the side profile with a height of 70±1.5. The third view shows the bottom surface with a width of 90±1.5.

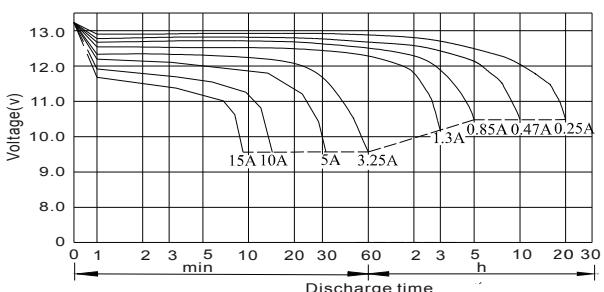
Constant Current Discharge Data (Amperes at 25°C)

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	21.0	12.5	10.00	5.50	3.25	1.39	0.92	0.50	0.26
1.65V	19.9	11.9	9.56	5.28	3.13	1.35	0.90	0.49	0.26
1.70V	18.8	11.3	9.10	5.05	3.01	1.30	0.88	0.48	0.25
1.75V	17.6	10.6	8.63	4.81	2.88	1.25	0.85	0.47	0.25
1.80V	16.4	10.0	8.14	4.56	2.74	1.19	0.82	0.46	0.25

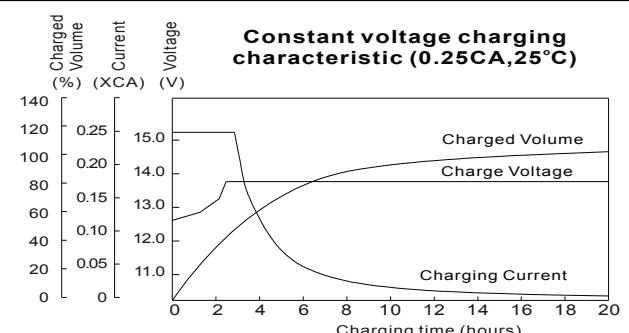
Constant Power Discharge Data (Watts per cell at 25°C)

End Point Volts/Cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	35.0	23.3	18.2	10.3	8.0	6.3	3.73	2.63	1.80
1.65V	32.8	22.0	17.3	9.7	7.6	6.1	3.62	2.56	1.77
1.70V	30.7	20.6	16.4	9.1	7.3	5.8	3.50	2.49	1.74
1.75V	28.5	19.3	15.4	8.6	6.9	5.5	3.36	2.42	1.70
1.80V	26.4	17.9	14.3	8.1	6.5	5.2	3.22	2.33	1.66

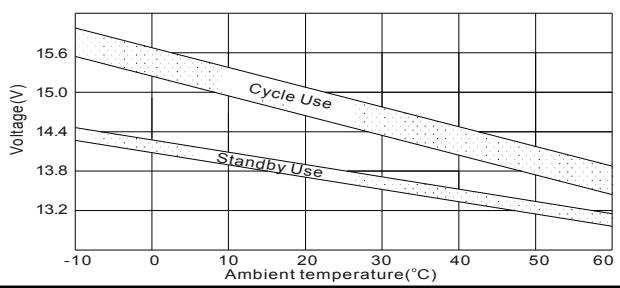
Discharge characteristic (25°C)



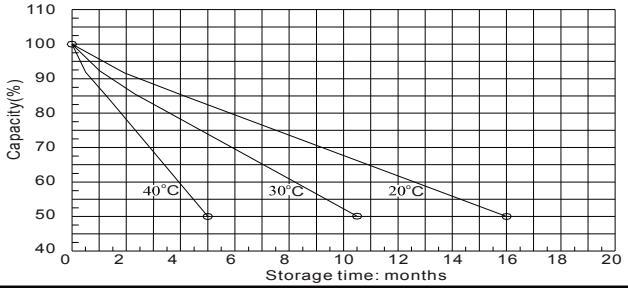
Constant voltage charging characteristic (0.25CA, 25°C)



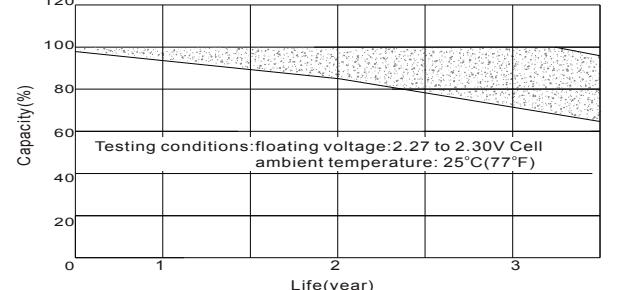
Relationship between charging voltage and temperature



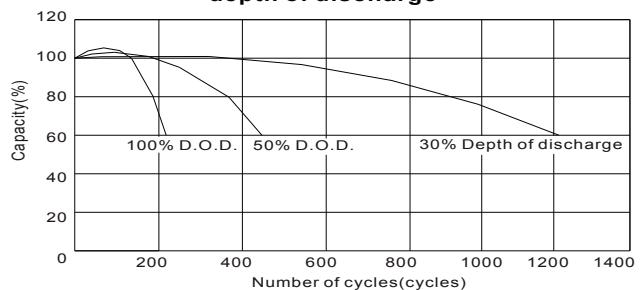
Self-discharge characteristic



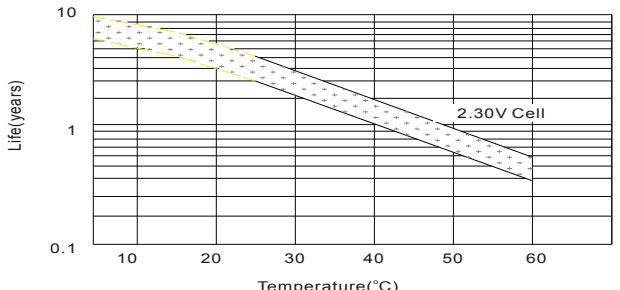
Life characteristics of Standby use



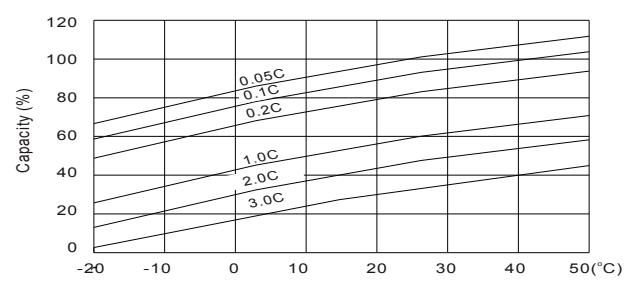
Cycle service life in relation to depth of discharge



Temperature effects on float life



Temperature effects on capacity



* The above characteristics data are average values obtained within three charge/discharge cycles not the minimum value. Neutron Power reserves the rights update the data information without prior notice.