



● NPG GEL Series Battery

NPG Series batteries are designed with special separator and GEL deep cycle technology to give Extra-durable cyclic performance at extreme temperature.

NPG series Batteries are the DEEP CYCLE batteries with 12 years floating design life at 25°C.

Meet with IEC, BS, JIS and Eurobat standard.

● Application

- *Emergency Power System
- *Communication equipment
- *Telecommunication systems
- *Uninterruptible power supplies
- *Solar power and wind power systems
- *Power tools
- *Power station
- *Marine equipment
- *Fire and Security System
- *Electric vehicle and wheelchairs etc.



● General Features

- *Safety Sealing
- *Non-spillable construction
- *High Reliability and Stability
- *Sealed and Maintenance-free
- *Safety and Quality certification
- *Longer Life in deep cycle application

● Construction

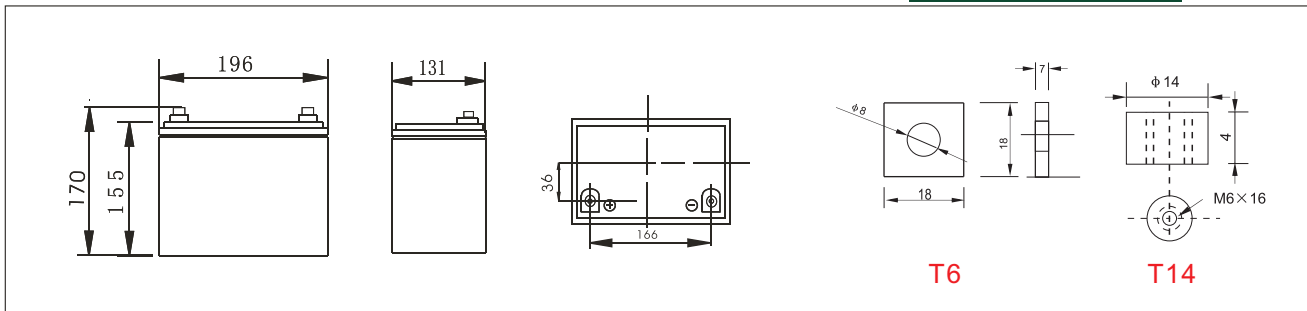
- *PositiveLead dioxide
- *ElectrolyteSulfuric acid thixotropic Gel
- *SeparatorMacromolecule polymer
- *ContainerABS(UL94-HB), Flammability Resistance of UL94-V2 can be available upon request
- *NegativeLead
- *Safety ValveEPDR
- *TerminalCopper

● Specification

Battery Model	Nominal Voltage		12V	
	Rated capacity(20 Hour rate)		31Ah	
Dimensions	Length	Width	Height	Total Height
	196mm (7.72 inches)	131mm(5.16 inches)	155mm(6.10 inches)	170mm (6.69inches)
Approx Weight	10.5kg(23.15lbs) ±3%			
Capacity 25°C (77°F)	20 hour rate (1.55A,10.8V)	10 hour (2.85A,10.5V)	5Hour (5.3A,10.2V)	1 Hour (18.6A,9.6V)
	31.0Ah	28.5Ah	26.5Ah	18.6Ah
Max.discharge current	310A(5 Sec.)			
Internal Resistance	Full charged at 25 °C : Approx 14mΩ			
Capacity affected by Temp. (20 HR)	40°C (104 °F)	25°C (77°F)	0°C (32°F)	-15°C (5°F)
	102%	100%	85%	65%
Self Discharge at 25°C (77°F)	After 3 months storage		After 6 months storage	After 12 months storage
	91%		82%	64%
Charge method 25°C (77°F)	Cycle Use		Float Use	
	14.10-14.40V (Initial charging current less than 11.4A)		13.50-13.80V	

● Outer dimensions (mm)

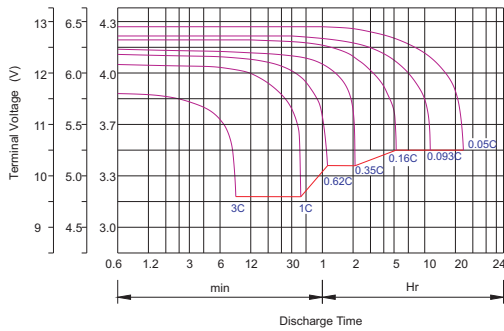
● Terminal Type (mm)



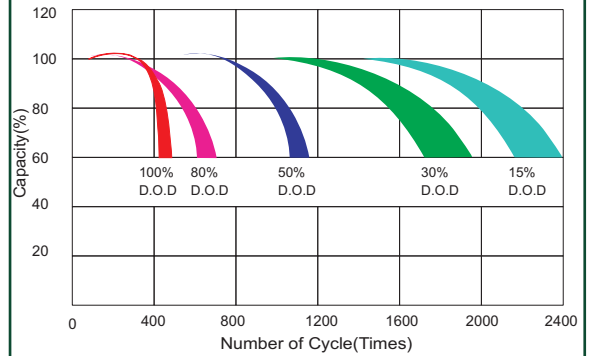
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C (77°F)													
Time		5min	10min	15min	30min	1hr	2hr	3hr	4hr	5hr	8hr	10hr	20hr
9.60V	A	91.60	60.30	48.60	32.60	17.20	10.00	7.40	5.70	4.72	3.35	3.00	1.62
	W	945.40	644.50	521.60	350.60	185.30	109.90	82.20	64.40	53.60	38.50	34.60	18.86
10.20V	A	88.70	54.50	45.80	31.20	16.10	9.60	7.20	5.60	4.63	3.26	2.95	1.57
	W	947.50	608.00	512.70	350.00	182.40	109.40	81.90	64.20	53.46	38.15	34.61	18.48
10.50V	A	85.70	48.70	40.10	29.20	15.60	9.30	7.00	5.50	4.58	3.23	2.89	1.56
	W	937.20	554.10	457.30	335.70	180.80	108.10	80.50	64.00	53.35	38.01	34.18	18.43
10.80V	A	82.70	45.90	37.20	26.90	15.10	9.10	6.80	5.40	4.46	3.15	2.86	1.54
	W	928.00	529.40	429.00	311.50	175.80	106.50	80.30	63.80	52.74	37.28	33.99	18.39
11.10V	A	79.90	43.30	34.40	24.00	14.60	8.90	6.60	5.30	4.35	3.06	2.72	1.46
	W	906.50	408.10	400.20	281.10	171.50	104.80	78.10	62.70	51.88	36.65	32.80	17.68



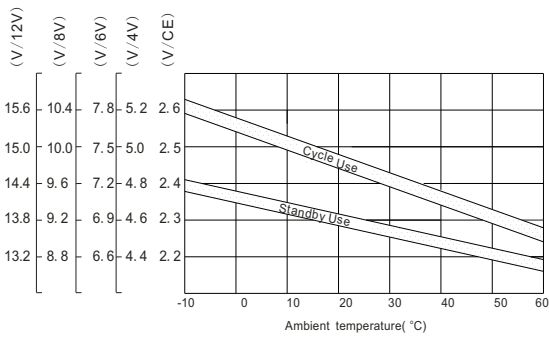
Discharge characteristic Curve



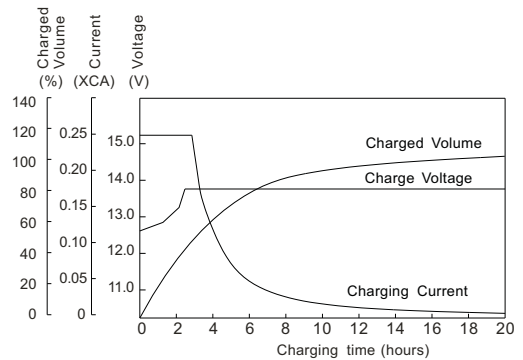
Cycle service life in relation to depth of discharge



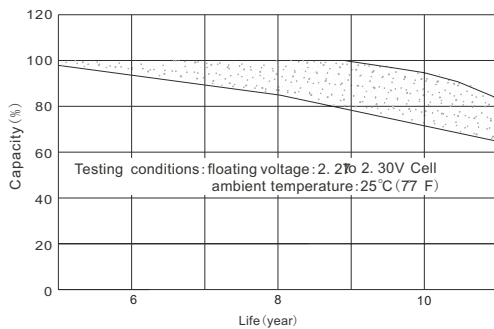
Relationship between charging voltage and temperature



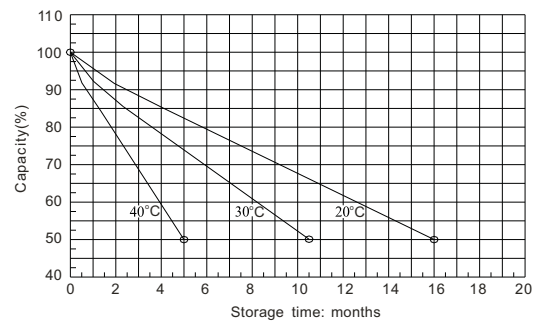
Constant voltage charging characteristic (0.25CA, at 25°C)



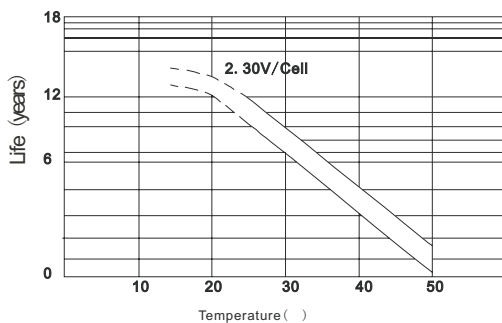
Life characteristics of standby use



Self-discharge characteristic



Temperature effects on float life



Charge characteristic Curve for standby use

