



**● 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
- \*Electric bicycle and wheelchairs, etc.
- \*Power tools
- \*Alarm system
- \*Marine equipment
- \*Fire and Security System

**● General Features**

- \*Safety Sealing
- \*Non-spillable construction
- \*High Reliability and Stability
- \*Sealed and Maintenance-free
- \*Safety and Quality certification
- \*Long Life and low self-discharge design

**● Construction**

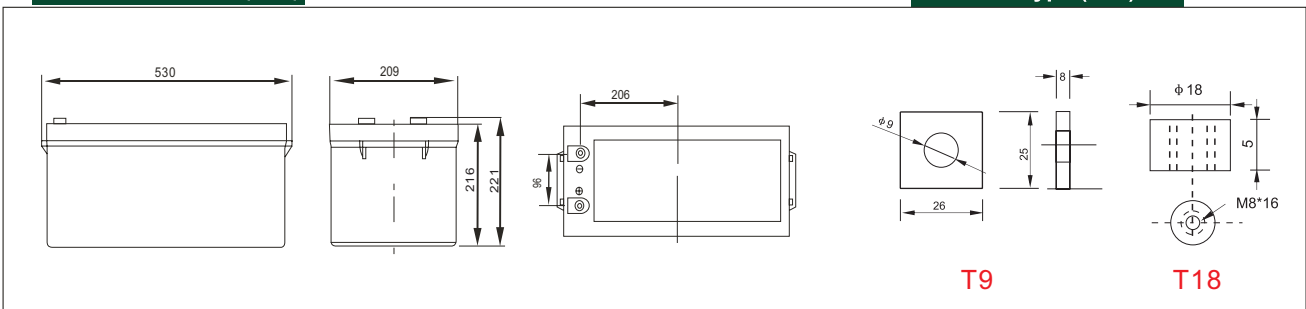
- \*Positive .....Lead dioxide
- \*Electrolyte .....Sulfuric acid thixotropic Gel
- \*Separator .....Macromolecule polymer
- \*Container .....ABS(UL94-HB), Flammability Resistance of UL94-V2 can be available upon request
- \*Negative .....Lead
- \*Safety Valve .....EPDR
- \*Terminal .....Copper

**● Specification**

Battery Model	Nominal Voltage		12V	
	Rated capacity(20 Hour rate)		180Ah	
Dimensions	Length	Width	Height	Total Height
	530mm (20.87 inches)	209mm(8.23inches)	216 mm(8.50 inches)	237mm(9.33 inches)
Approx Weight	53.5kg(117.95lbs)±3%			
Capacity 25°C (77°F)	20 hour (9A,10.8V)	10 hour (16.6A,10.5V)	5 Hour (30.6A,10.2V)	1 Hour (108A,9.6V)
	180Ah	166 Ah	153 Ah	108 Ah
Max.discharge current	1800A(5 Sec.)			
Internal Resistance	Full charged at 25 °C: Approx 6.0 mΩ			
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 66A)		13.50-13.80V	

**● Outer dimensions (mm)**

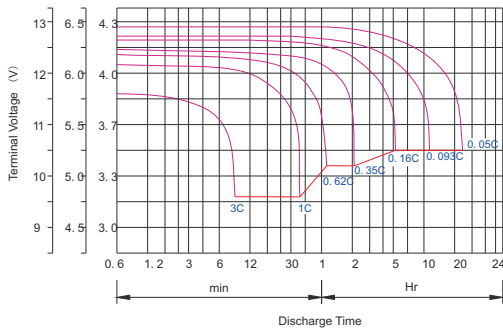
**● Terminal Type (mm)**



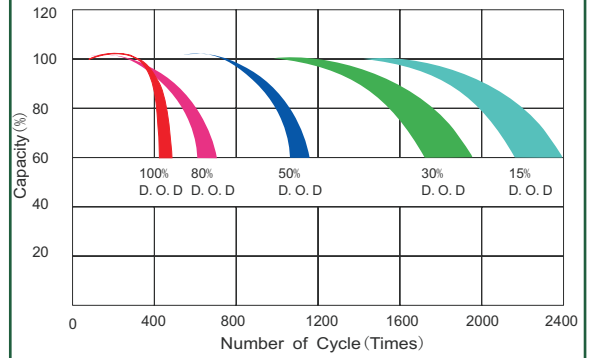
Time	5min	10min	15min	30min	1hr	2hr	3hr	4hr	5hr	8hr	10hr	20hr
9.60V	A	532.0	350.0	282.0	189.0	100.0	58.0	42.7	33.2	27.4	19.4	9.4
	W	5487.0	3741.0	3028.0	2035.0	1076.0	638.0	474.8	373.5	311.4	222.6	109.4
10.20V	A	515.0	316.0	266.0	181.0	94.0	55.0	41.5	32.4	26.9	18.9	9.1
	W	5499.0	3529.0	2976.0	2031.0	1059.0	639.0	480.6	376.4	313.5	221.4	107.1
10.50V	A	498.0	283.0	233.0	169.0	91.0	54.0	40.5	31.9	26.6	18.8	9.1
	W	5440.0	3216.0	2654.0	1949.0	1050.0	628.0	472.0	372.9	311.4	220.6	107.9
10.80V	A	480.0	266.0	216.0	156.0	88.0	53.0	39.5	31.4	25.9	18.3	9.0
	W	5386.0	3072.0	2490.0	1808.0	1020.0	618.0	465.8	370.5	306.1	216.4	106.8
11.10V	A	464.0	250.0	200.0	139.0	85.0	51.0	38.2	30.5	25.2	17.8	8.5
	W	5261.0	2891.0	2323.0	1631.0	996.0	608.0	453.6	363.8	301.1	212.7	102.6



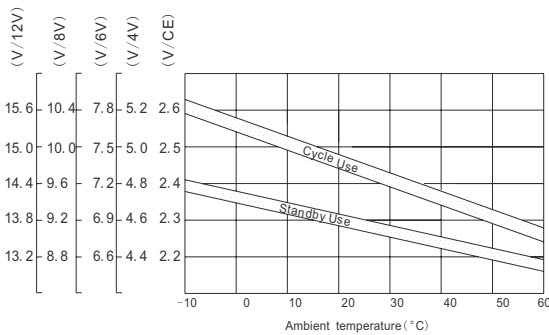
Discharge characteristic Curve



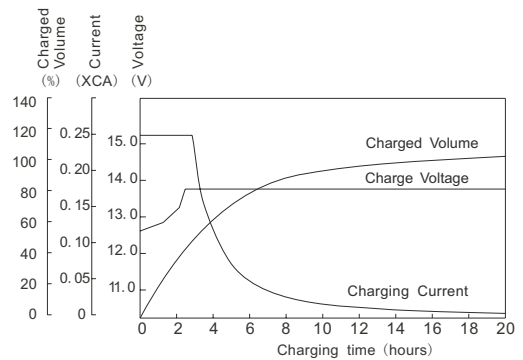
Cycle service life in relation to depth of discharge



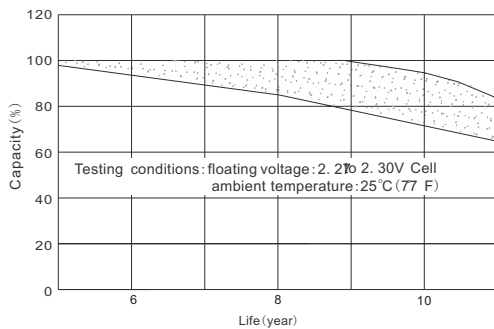
Relationship between charging voltage and temperature



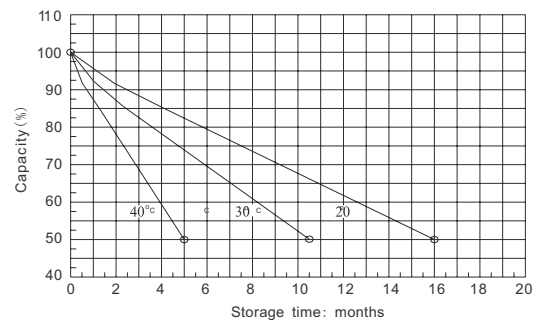
Constant voltage charging characteristic (0.25CA, at 25°C)



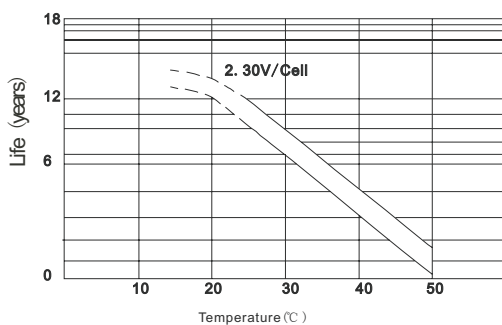
Life characteristics of standby use



Self-discharge characteristic



Temperature effects on float life



Charge characteristic Curve for standby use

