



● 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

- *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

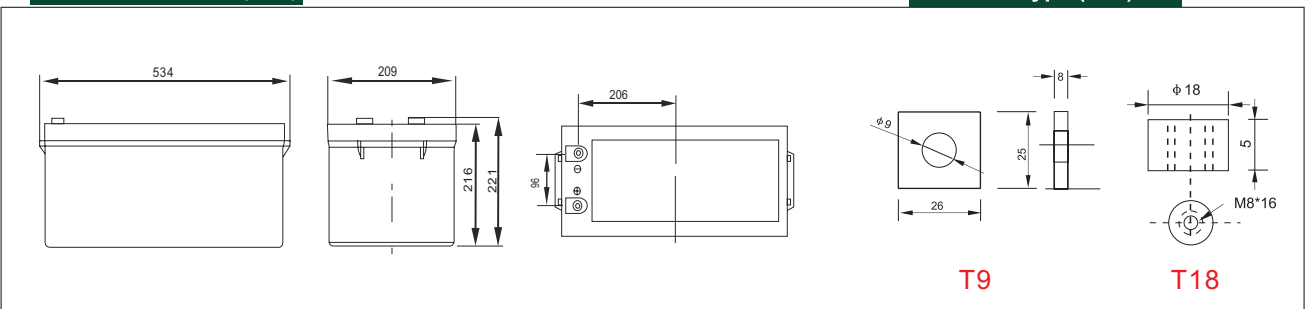


● Specification

Battery Model	Nominal Voltage		12V	
	Rated capacity (20 Hour rate)		160Ah	
Dimensions	Length	Width	Height	Total Height
	534mm (21.02 inches)	209mm(8.23inches)	216 mm(8.50 inches)	221mm(8.70 inches)
Approx Weight	51.0kg(112.43lbs)±3%			
Capacity 25°C (77°F)	20 hour (8.0A,10.8V)	10 hour (14.7A,10.5V)	5 Hour (27.2A,10.2V)	1 Hour (96A,9.6V)
	160Ah	147 Ah	136Ah	96Ah
Max.discharge current	1600A(5 Sec.)			
Internal Resistance	Full charged at 25 °C: Approx 6.5 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 59A)		13.50-13.80V	

● Outer dimensions (mm)

● Terminal Type (mm)

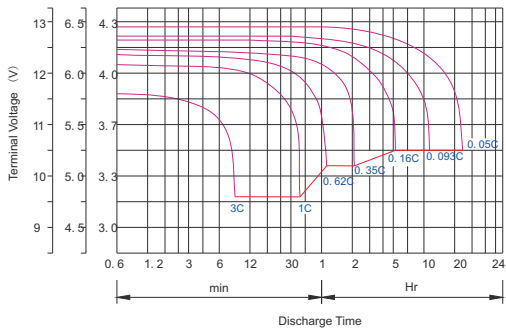


Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C (77°F)

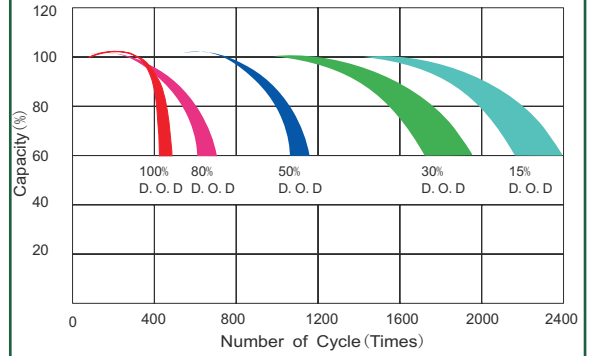
Time		5min	10min	15min	30min	1hr	2hr	3hr	4hr	5hr	8hr	10hr	20hr
9.60V	A	471.0	310.0	250.0	168.0	88.0	51.0	37.8	29.4	24.3	17.2	15.4	8.3
	W	4859.0	3313.0	2681.0	1802.0	953.0	565.0	420.5	330.8	275.8	197.1	178.3	96.9
10.20V	A	456.0	280.0	235.0	160.0	83.0	49.0	36.8	28.7	23.8	16.8	15.1	8.1
	W	4870.0	3125.0	2635.0	1799.0	938.0	566.0	425.6	333.3	277.6	196.1	177.9	94.8
10.50V	A	441.0	250.0	206.0	150.0	80.0	48.0	35.9	28.2	23.5	16.6	14.8	8.1
	W	4817.0	2848.0	2350.0	1726.0	929.0	556.0	417.9	330.2	275.7	195.3	175.7	95.6
10.80V	A	425.0	236.0	191.0	138.0	78.0	47.0	35.0	27.8	22.9	16.2	14.7	7.9
	W	4770.0	2721.0	2205.0	1601.0	903.0	547.0	412.5	328.1	271.1	191.6	174.7	94.5
11.10V	A	411.0	221.0	177.0	123.0	75.0	46.0	33.8	27.0	22.3	15.7	14.0	7.5
	W	4659.0	2560.0	2057.0	1445.0	882.0	539.0	401.7	322.1	266.7	188.4	168.6	90.9



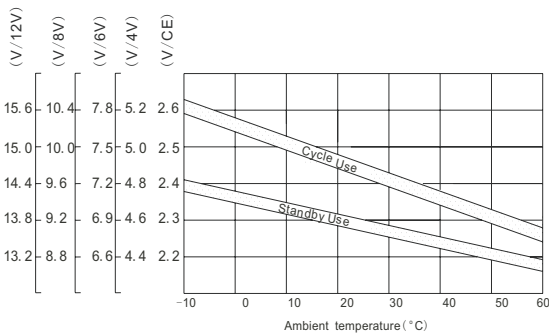
Discharge characteristic Curve



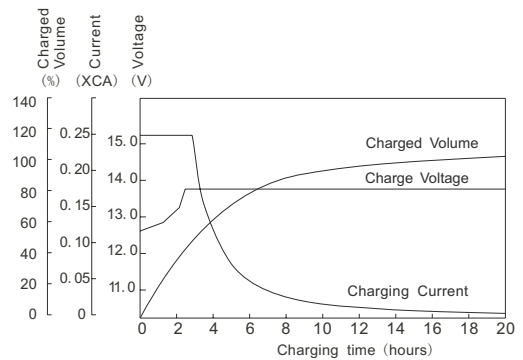
Cycle service life in relation to depth of discharge



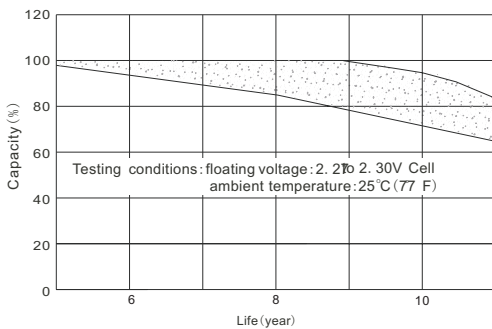
Relationship between charging voltage and temperature



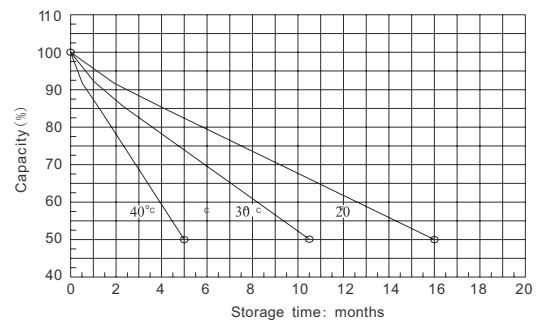
Constant voltage charging characteristic (0.25CA, at 25°C)



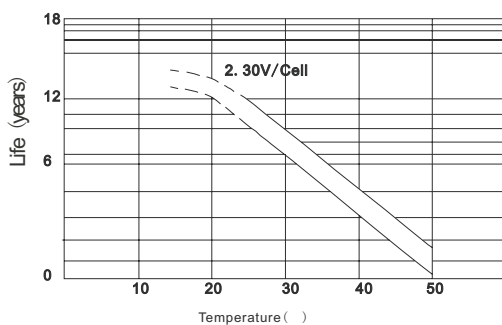
Life characteristics of standby use



Self-discharge characteristic



Temperature effects on float life



Charge characteristic Curve for standby use

