



### ● NPM General Series Battery

NPM General Series VRLA batteries are designed with AGM (Absorbent Glass Mat) technology, High performance plates and electrolyte to give extra power output for common power backup system. NPM series Batteries are the general purpose batteries with 10 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

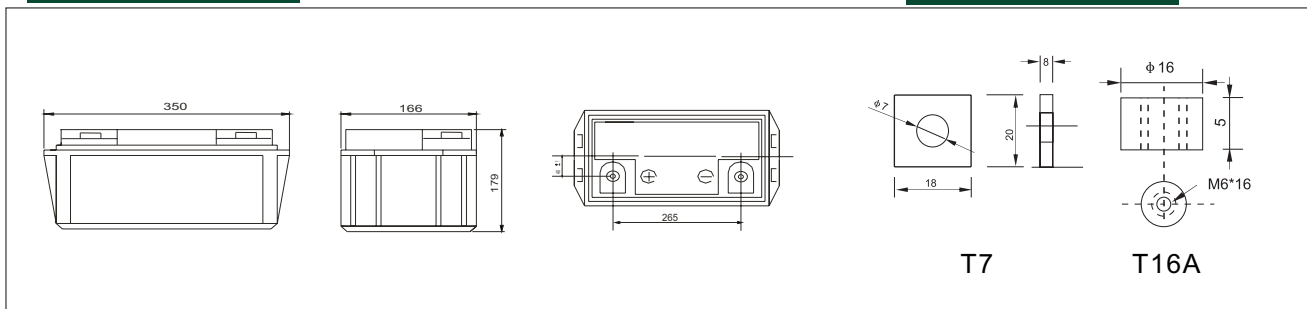
- \*Positive .....Lead dioxide
- \*Electrolyte .....Sulfuric acid
- \*Separator .....Fiber glass
- \*Container .....ABS(UL94-HB), Flammability Resistance of UL94-V2 can be available upon request
- \*Negative .....Lead
- \*Safety Valve .....EPDR
- \*Terminal .....Copper

### ● Specification

Battery Model	Nominal Voltage		12V	
	Rated capacity(10 Hour rate)		60Ah	
Dimensions	Length	Width	Height	Total Height
	350mm (13.78 inches)	166mm(6.54inches)	179mm(7.05 inches)	179mm (7.05 inches)
Approx Weight	19.4kg(42.77lbs) ±3%			
Capacity 25°C (77°F)	10 hour (6.0A,10.8V)	5 Hour ( 10A,10.5V)	3 Hour ( 15A,10.2V)	1 Hour (36.0A,9.6V)
	60Ah	50Ah	45Ah	36 Ah
Max.discharge current	600A(5Sec.)			
Internal Resistance	Full charged at 25 °C: Approx 6.0mΩ			
Capacity affected by Temp. (10 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 24A)		13.50-13.80V	

### ● Outer dimensions (mm)

### ● Terminal Type (mm)

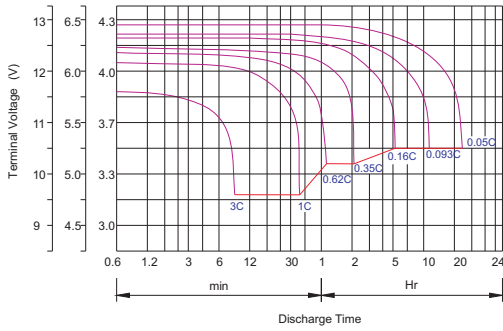


### Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C (77°F)

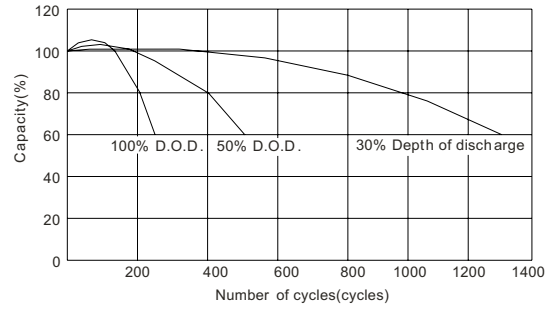
Time	5min	10min	15min	30min	1hr	2hr	3hr	4hr	5hr	8hr	10hr	20hr
9.60V	A	192.0	127.0	102.0	68.0	36.0	21.0	15.0	12.0	10.0	7.0	3.0
	W	1983.0	1352.0	1094.0	735.0	389.0	231.0	172.0	135.0	113.0	80.0	40.0
10.20V	A	186.0	114.0	96.0	65.0	34.0	20.0	15.0	12.0	10.0	7.0	3.0
	W	1988.0	1276.0	1076.0	734.0	383.0	231.0	174.0	136.0	113.0	80.0	39.0
10.50V	A	180.0	102.0	84.0	61.0	33.0	20.0	15.0	12.0	10.0	7.0	3.0
	W	1966.0	1162.0	959.0	704.0	379.0	227.0	171.0	135.0	113.0	80.0	39.0
10.80V	A	174.0	96.0	78.0	56.0	32.0	19.0	14.0	11.0	9.0	7.0	3.0
	W	1947.0	1111.0	900.0	653.0	369.0	223.0	168.0	134.0	111.0	78.0	39.0
11.10V	A	168.0	90.0	72.0	50.0	31.0	19.0	14.0	11.0	9.0	6.0	3.0
	W	1902.0	1045.0	839.0	590.0	360.0	220.0	164.0	131.0	109.0	77.0	37.0



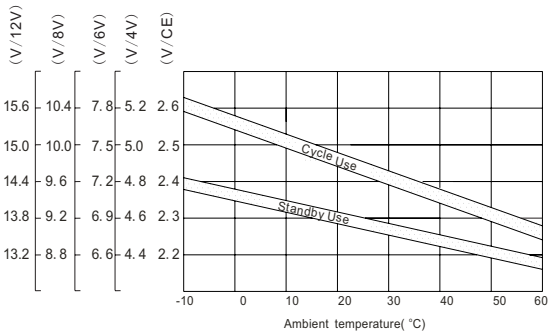
Discharge characteristic Curve



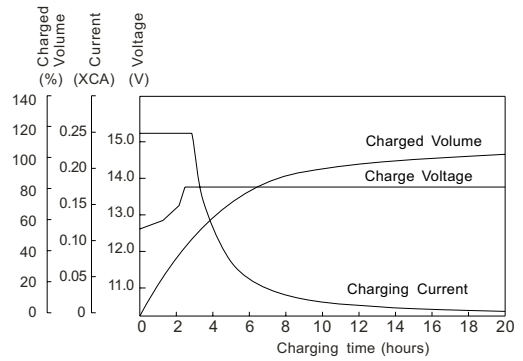
Cycle service life in relation to depth of discharge



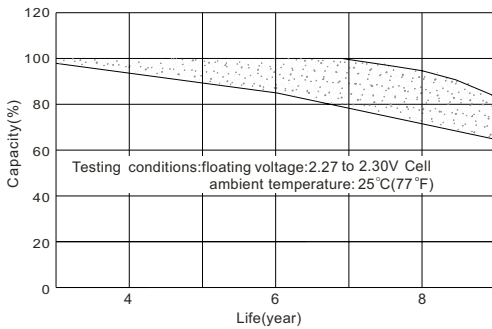
Relationship between charging voltage and temperature



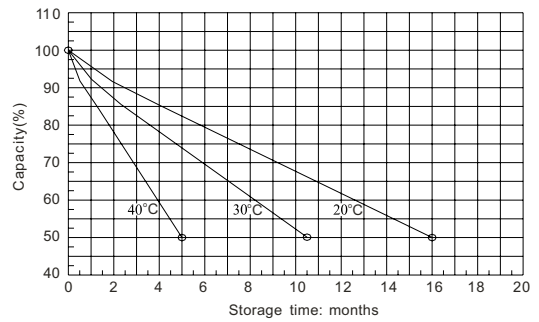
Constant voltage charging characteristic (0.25CA, at 25°C)



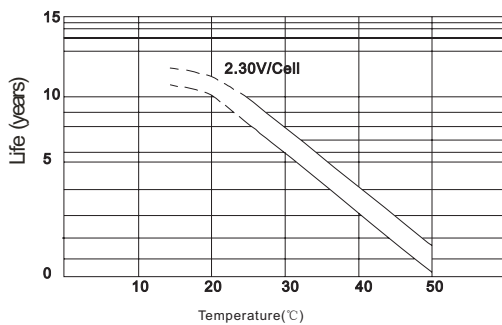
Life characteristics of standby use



Self-discharge characteristic



Temperature effects on float life



Charge characteristic Curve for standby use

