



Deep Cycle Series Battery

NPD series VRLA batteries are superior deep cycle design with thick plates, high-density active materials And Slightly stronger electrolyte, Which can withstand repeated deep cyclic applications. Deep cycle series Batteries are the special design batteries with 5 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
- *Golf cars and buggies
- *Marine equipment
- *Solar and wind power system

General Features

- *Safety Sealing
- *Non-spillable construction
- *High power density
- *Excellent recovery from Deep discharge
- *Thick plates and high active materials
- *Longer Life and low self-discharge design

Construction

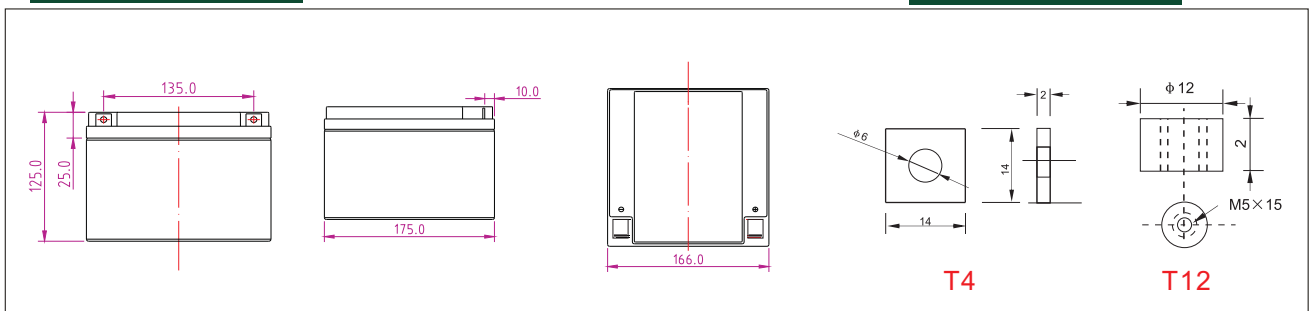
- *PositiveLead dioxide
- *ElectrolyteSulfuric acid
- *SeparatorFiber glass
- *ContainerABS(UL94-HB), Flammability Resistance of UL94-V2 can be available upon request
- *NegativeLead
- *Safety ValveEPDR
- *TerminalCopper

Specification

Battery Model	Nominal Voltage	12V		
	Rated capacity(20 Hour rate)	24Ah		
Dimensions	Length	Width	Height	Total Height
	175mm(6.89 inches)	166mm (6.54 inches)	125mm(4.92 inches)	125mm(4.92 inches)
Approx Weight	8.1kg(17.85lbs)±3%			
Capacity 25°C (77°F)	20hour(1.2A,10.8V)	10 hour (2.2A,10.5V)	5 Hour (4.1A,10.2V)	1 Hour (14.4A,9.6V)
	24.0AH	22.0Ah	20.5Ah	14.4Ah
Max.discharge current	240A(5 Sec.)			
Internal Resistance	Full charged at 25 °C: Approx 12mΩ			
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	
	14.4-14.7V (Initial charging current less than 9.6A)		13.50-13.80V	

Outer dimensions (mm)

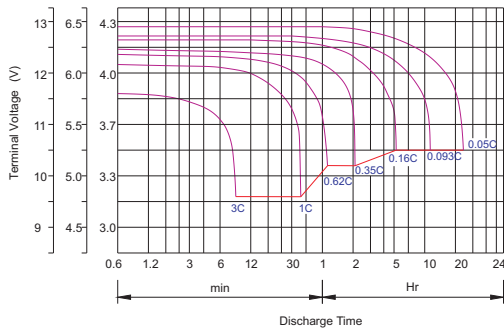
Terminal Type (mm)



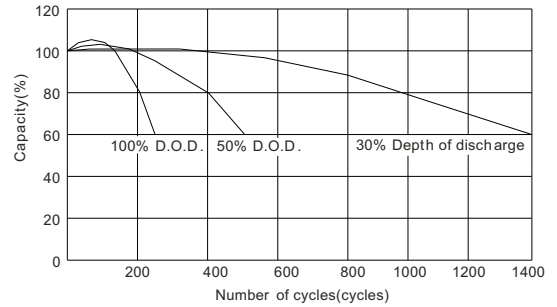
Time	5min	10min	15min	30min	1hr	2hr	3hr	4hr	5hr	8hr	10hr	20hr
9.60V	A	86.40	56.60	42.00	27.60	14.40	8.40	6.18	4.96	4.21	2.78	1.24
	W	1019.00	640.60	484.00	293.00	166.00	97.20	71.50	57.40	48.70	32.10	14.40
10.20V	A	79.20	54.20	38.60	26.20	13.52	8.06	6.00	4.80	4.13	2.73	1.21
	W	959.00	606.00	455.00	291.00	156.00	93.30	69.50	55.60	47.80	31.60	14.00
10.50V	A	72.10	50.60	36.00	25.40	13.08	7.90	5.90	4.56	4.10	2.70	1.20
	W	926.00	588.40	435.00	288.00	151.40	91.50	68.30	52.80	47.50	31.30	13.90
10.80V	A	69.30	48.40	33.60	24.70	12.64	7.70	5.80	4.48	3.90	2.63	1.17
	W	812.00	570.00	419.00	287.00	147.00	89.60	67.50	52.15	45.40	30.00	13.60
11.10V	A	64.10	45.60	31.20	24.00	12.20	7.50	5.50	4.40	3.73	2.56	1.14
	W	785.00	551.00	399.00	285.00	145.00	89.00	65.50	52.00	44.40	29.00	13.50



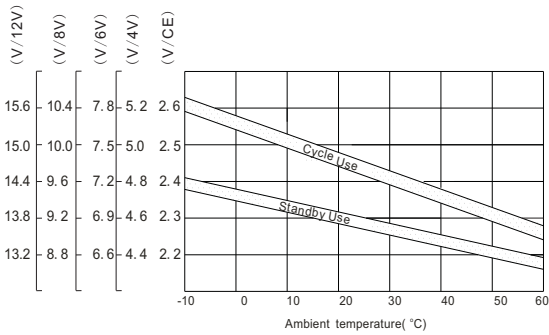
Discharge characteristic Curve



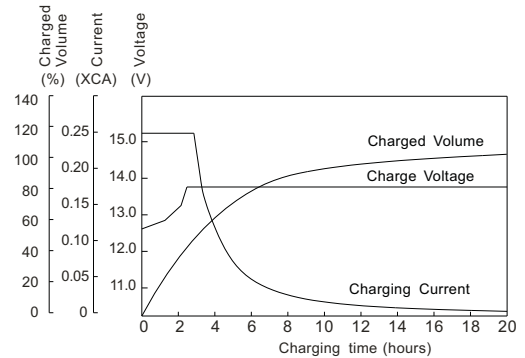
Cycle service life in relation to depth of discharge



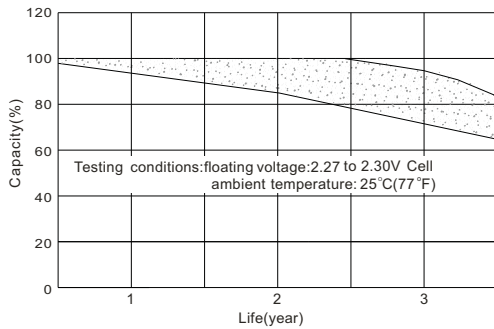
Relationship between charging voltage and temperature



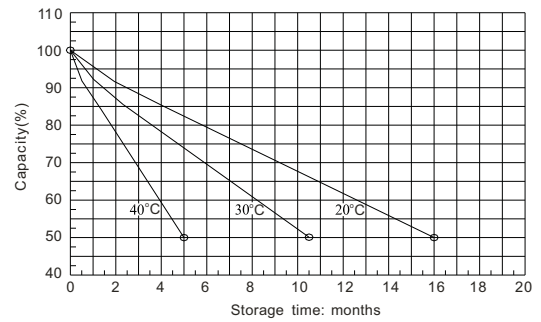
Constant voltage charging characteristic (0.25CA, at 25°C)



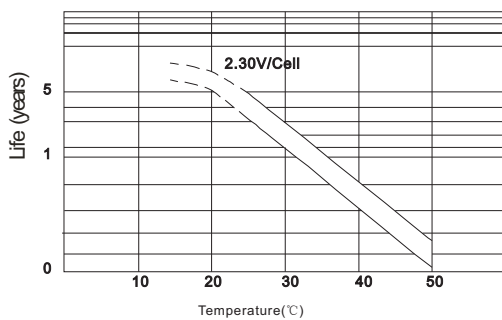
Life characteristics of standby use



Self-discharge characteristic



Temperature effects on float life



Charge characteristic Curve for standby use

