



**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 18 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

**Specification**

**Construction**

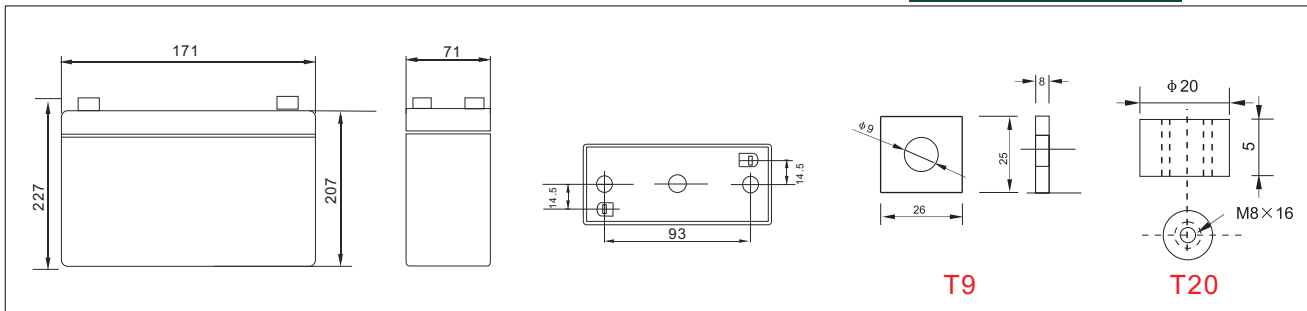
- \*Positive .....Lead dioxide
- \*Electrolyte .....Sulfuric acid
- \*Separator .....Fiber glass
- \*Container .....ABS(UL94-HB), Flammability Resistance of UL94-V2 can be available upon request
- \*Negative .....Lead
- \*Safety Valve .....EPDR
- \*Terminal .....Copper



Battery Model	Nominal Voltage	2V		
	Rated capacity(10 Hour rate)	100Ah		
Dimensions	Length	Width	Height	Total Height
	171mm (6.73 inches)	71mm(2.80 inches)	207mm(8.15 inches)	227mm (8.94 inches)
Approx Weight	5.6kg(12.35bs)±3%			
Capacity 25°C (77°F)	10 Hour rate (10A,1.80V)	5 Hour rate (17A,1.75V)	3 Hour rate (25A,1.70V)	1 Hour rate (55A,1.60V)
	100Ah	85Ah	75Ah	55Ah
Max.discharge current	1000A(5 Sec.)			
Internal Resistance	Full charged at 25 °C (77°F): Approx 1.0mΩ			
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	
	2.35-2.40V (Initial charging current less than 40A)		2.25-2.30V	

**Outer dimensions (mm)**

**Terminal Type (mm)**

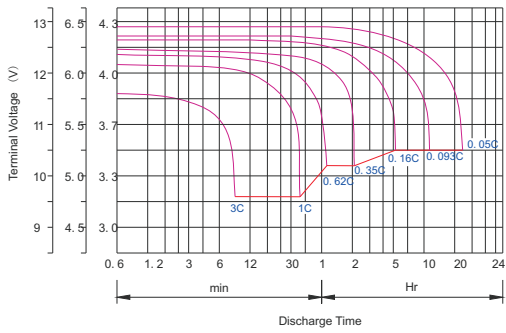


**Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C (77°F)**

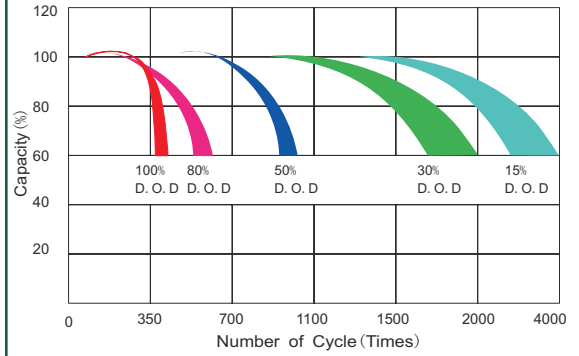
Time		5min	10min	15min	30min	1hr	2hr	3hr	4hr	5hr	8hr	10hr	20hr
1.60V	A	320	211	170	114	60.0	35.0	25.7	20.0	16.5	11.7	10.5	5.7
	W	551	376	304	204	108.0	64.1	47.7	37.5	31.3	22.3	20.2	11.0
1.70V	A	310	190	160	109	56.4	33.4	25.0	19.5	16.2	11.4	10.3	5.5
	W	552	354	299	204	106.3	64.2	48.3	37.8	31.5	22.2	20.2	10.8
1.75V	A	300	170	140	102	54.6	32.6	24.4	19.2	16.0	11.3	10.1	5.5
	W	546	323	266	196	105.4	63.0	47.4	37.4	31.3	22.1	19.9	10.8
1.80V	A	289	161	130	94	52.8	31.8	23.8	18.9	15.6	11.0	10.0	5.4
	W	541	308	250	182	102.4	62.1	46.8	37.2	30.7	21.7	19.8	10.7
1.85V	A	280	150	120	84	51.0	31.0	23.0	18.4	15.2	10.7	9.5	5.1
	W	528	290	233	164	100.0	61.1	45.5	36.5	30.2	21.4	19.1	10.3



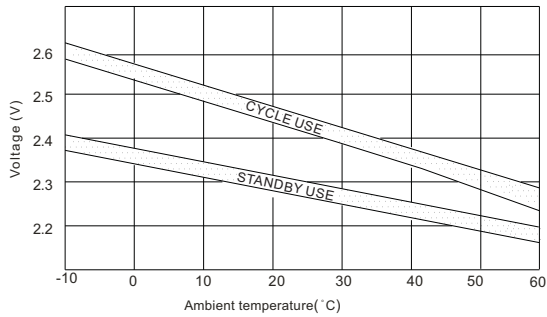
**Discharge characteristic Curve**



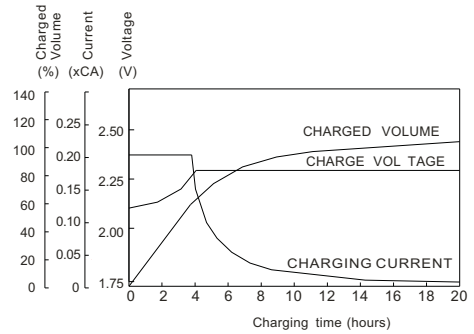
**Cycle service life in relation to depth of discharge**



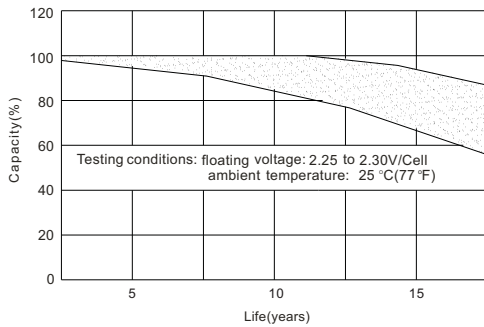
**Relationship between charging voltage and temperature**



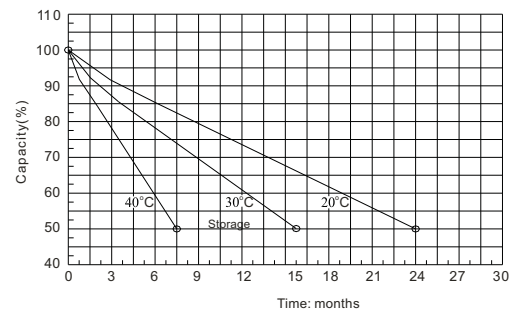
**Constant voltage charging characteristic (0.25CA, at 25°C)**



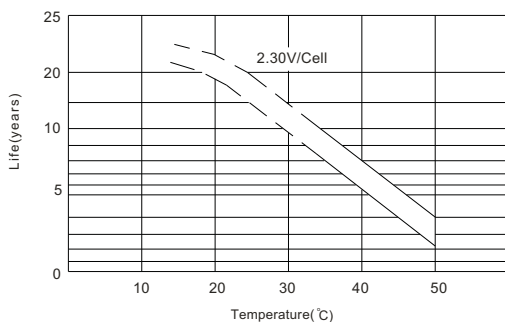
**Life characteristics of standby use**



**Self-discharge characteristic**



**Temperature effects on float life**



**Charge characteristic Curve for standby use**

