



**OPzV Series Battery**

NAPEL OPzV series battery( tubular GEL battery) are newly developed tubular positive plates with fumed gelled electrolyte, Performances meet & exceed the standards specified in DIN 40742, and with very long design life and very high deep cycling capabilities. This type battery is recommended for telecom outdoor applications, renewable energy systems and other harsh environment applications.

**Application**

- \*Telecommunication equipment;
- \*UPS power supply;
- \*Solar power system;
- \*Wind power system;
- \*Electronic instruments Fire alarm and security devices.

**General Features**

- \*Gelled electrolyte, no flow, no leakage or no gradation of sulfuric acid;
- \*The positive plate is tubular plate, which can effectively prevent the active materials from falling off;
- \*PVC separator, which is special for gel battery with tiny holes;
- \*The separator has high volume porosity, low electrical resistance and excellent wettability.

**Construction**

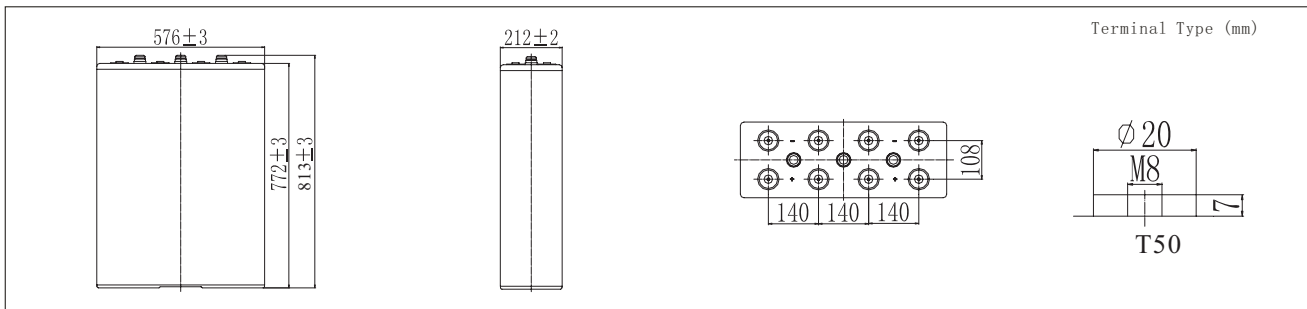
- \*Positive Plates: Robust tubular plates consisting of Pb-Ca-Sn alloy;
- \*Negative Plates: Grid plate construction consisting of lead calcium alloy;
- \*Separator: Microporous and robust PVC-SiO<sub>2</sub>;
- \*Terminals: cooper
- \*Container: ABS (UL94-HB), Flammability resistance of UL94-V1 can be available upon request ;

**Specification**

Battery Model	Nominal Voltage		2V		
	Rated capacity(10 Hour rate)		3000Ah		
Dimensions	Length	Width	Height	Total Height	
	576mm (22.68inches)	212mm(8.35 inches)	772mm(30.39 inches)	813mm(32.01inches)	
Approx Weight	230.0kg(507.061lbs)				
Capacity 25°C (77°F)	10 hour rate (1.80V,300A)	5 hour rate(1.75V,537A)	3 hour rate(1.70V,785A)	1 hour rate(1.6V,1710A)	
	3000Ah	2685Ah	2355 Ah	1710Ah	
Max. discharge current					
Internal Resistance	Full charged at 25 °C: Approx 0.13mΩ				
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	
	93%		85%	72%	
Charge method 25°C (77°F)	Cycle Use			Float Use	
	2.35-2.40V (Initial charging current less than 600A)			2.23-2.25V	

**Outer dimensions (mm)**

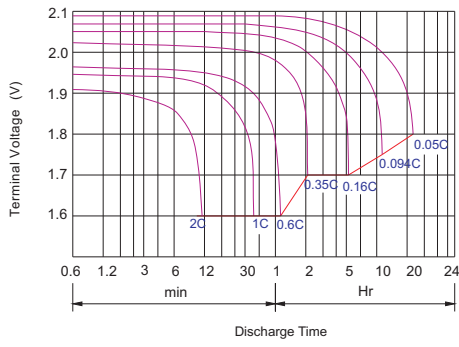
**Terminal Type (mm)**



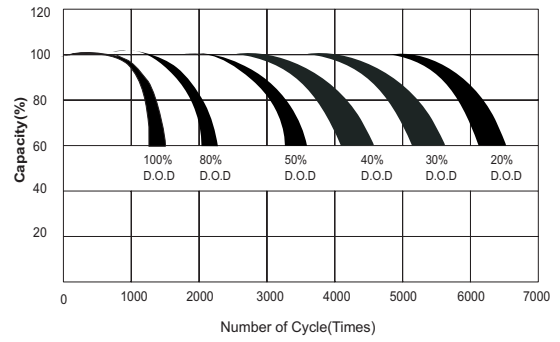
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C (77°F)											
Current	30min	60min	2hr	3hr	4hr	5hr	6hr	8hr	10hr	20hr	24hr
A	2550	1710	1035	796	643.0	548.0	471.0	370.0	305.0	162.0	139.0
W	4769	3249	1998	1559	1259.0	1079.0	928.0	733.0	608.0	324.0	280.0
A	2499	1684	1029	791	639.0	545.0	468.0	368.0	305.0	162.0	139.0
W	4673	3200	1986	1550	1252.0	1073.0	923.0	729.0	607.0	323.0	280.0
A	2423	1642	1020	785	634.0	541.0	465.0	366.0	304.0	161.0	138.0
W	4530	3119	1969	1540	1243.0	1065.0	917.0	724.0	605.0	322.0	278.0
A	2364	1609	1005	780	630.0	537.0	462.0	363.0	302.0	160.0	138.0
W	4420	3057	1939	1529	1235.0	1058.0	910.0	719.0	601.0	320.0	277.0
A	2277	1560	979	757	611.0	521.0	448.0	352.0	300.0	159.0	137.0
W	4258	2963	1890	1483	1198.0	1026.0	883.0	697.0	597.0	318.0	276.0



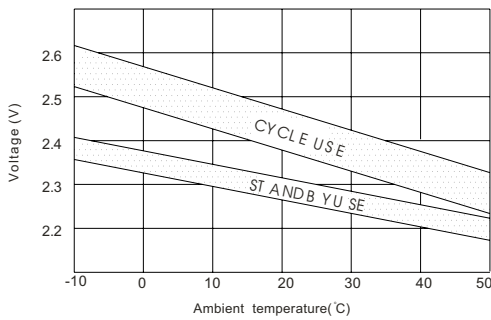
Discharge characteristic Curve



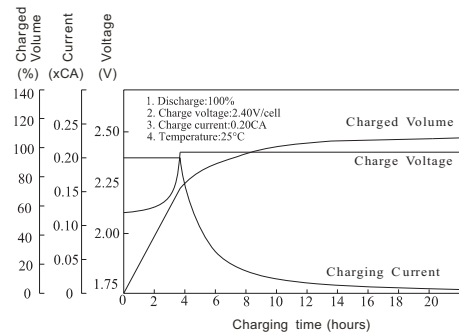
Cycle service life in relation to depth of discharge



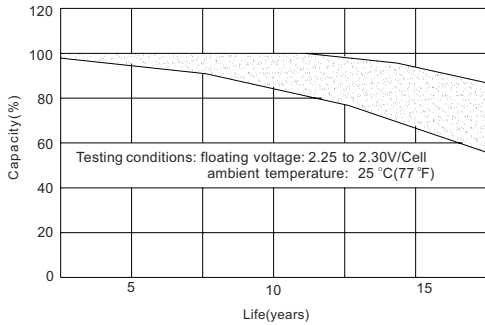
Relationship between charging voltage and temperature



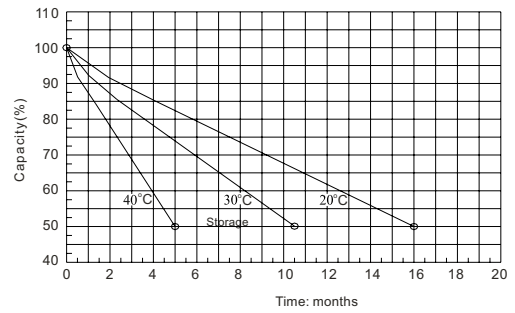
Constant voltage charging characteristic (0.25CA, at 25°C)



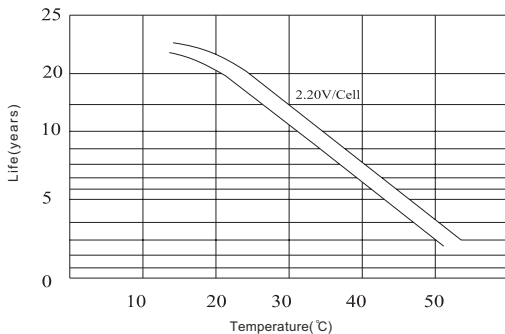
Life characteristics of standby use



Self-discharge characteristic



Temperature effects on float life



Charge characteristic Curve for standby use

