

Deep Cycle Series Battery

DC 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 6 years floating design life at 25°C.
Meet with IEC,BS,JIS and Eurobat standard,UL(MH62092),CE approved.

Application

- * Emergency Power System
- * Communication equipment
- * Telecommunication systems
- * Uninterruptible power supplies
- * Electric toy car and wheelchairs, etc.
- * Power tools
- * Alarm system
- * Marine equipment
- * Medical equipment
- * Fire and Security System



General Features

- * Heavy Duty Grid
- * Mechanized assembly
- * Non-spillable construction
- * High Reliability and Stability
- * Sealed and Maintenance-free
- * Long Life and low self-discharge design

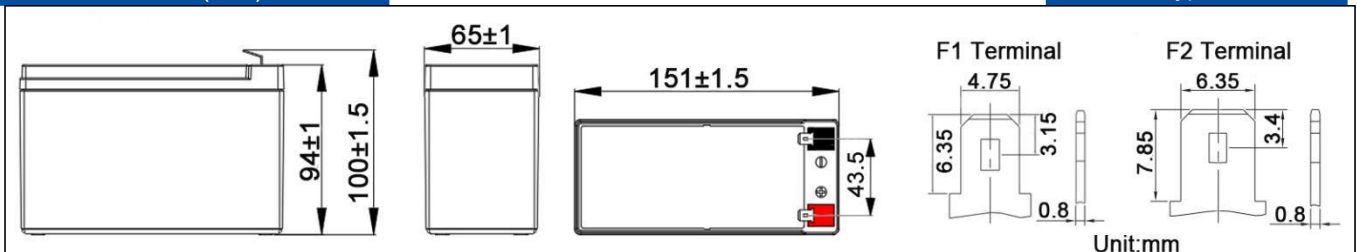
Construction

- * Positive Lead dioxide
- * Electrolyte Sulfuric acid
- * Separator Fiber glass
- * Container ABS(UL94-HB)/Flame Retardant ABS (UL94-V0)
- * Negative Lead
- * Safety Valve EPDM
- * Terminal Copper

Specification

Battery Model	Nominal Voltage		12V (6 cells per unit)	
	Rated capacity (20 Hour rate)		9.0Ah	
Dimension	Length	Width	Height	Total Height
	151mm (5.94 inches)	65mm (2.56 inches)	94mm (3.70 inches)	100mm (3.94 inches)
Approx Weight	2.50kg(5.51 lbs) ± 3%			
Internal Resistance	Full charged at 25°C(77°F):Approx 17.3(mΩ/25°C ± 15%)			
Maximum Charge Current	2.70A			
Max.discharge current	135A (5Sec.)			
Short-circuit current	400A			
Operating Temperature Range	Nominal Operating Temperature	Discharge	Charge	Storage
	25°C(77°F)	-15°C~ 50°C(5°F~122°F)	-15°C~ 40°C(5°F~104°F)	-15°C~ 40°C(5°F~104°F)
Capacity @ 25°C (77°F)	20 hour rate(0.455A,10.5V)	10 hour rate(0.863A,10.5V)	3 hour rate(2.370A,10.2V)	1 hour rate(5.93A,9.6V)
	9.10Ah	8.63Ah	7.11Ah	5.93Ah
Capacity affected by Temp.(20HR)	40°C (104°F)	25°C (77°F)	0°C (32°F)	-15°C (5°F)
	102%	100%	85%	65%
Charge method at 25°C(77°F)	Float Charging Voltage	Equalization Charging Voltage	Cycle Use Voltage	
	13.5~13.8 VDC (-3mV/cell/°C)	14.1~14.4 VDC (-4mV/cell/°C)	14.4~15.0 VDC (-5mV/cell/°C)	

Outer dimension (mm)

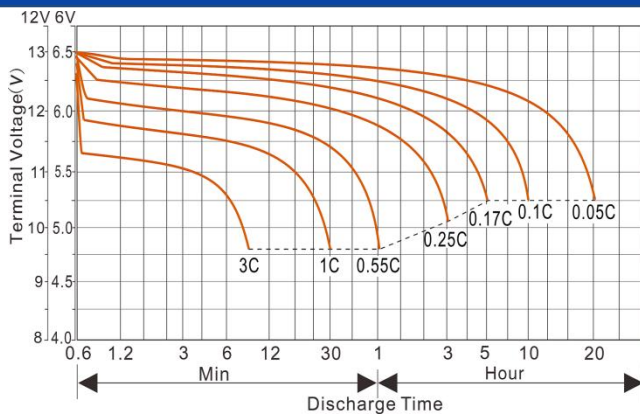


Terminal Type

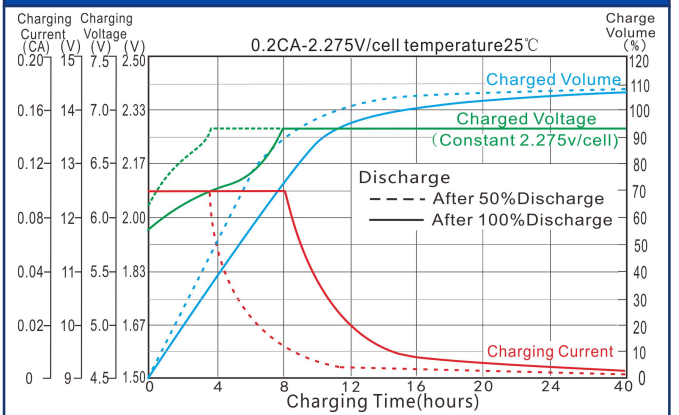
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

F.V/Time		5min	10min	15min	20min	30min	1h	1.5h	2h	3h	5h	8h	10h	20h
1.85V/cell	A	29.0	20.1	15.80	12.66	9.15	5.31	3.85	3.066	2.230	1.506	1.019	0.833	0.440
	W	55.7	39.3	31.15	25.05	18.19	10.63	7.72	6.160	4.488	3.037	2.062	1.687	0.894
1.80V/cell	A	31.5	21.3	16.53	13.21	9.49	5.48	3.96	3.145	2.280	1.534	1.037	0.849	0.448
	W	59.8	41.3	32.41	26.04	18.81	10.93	7.92	6.299	4.575	3.085	2.093	1.716	0.909
1.75V/cell	A	33.8	22.5	17.23	13.71	9.79	5.62	4.06	3.216	2.326	1.561	1.053	0.863	0.455
	W	63.5	43.3	33.61	26.93	19.34	11.18	8.10	6.424	4.655	3.132	2.121	1.741	0.921
1.70V/cell	A	36.1	23.5	17.90	14.18	10.08	5.76	4.14	3.282	2.370	1.585	1.066	0.875	0.462
	W	67.1	44.9	34.78	27.75	19.85	11.42	8.23	6.539	4.732	3.173	2.143	1.762	0.934
1.67V/cell	A	37.2	24.0	18.22	14.40	10.22	5.83	4.18	3.313	2.391	1.595	1.072	0.880	0.465
	W	68.7	45.7	35.33	28.13	20.10	11.55	8.30	6.592	4.768	3.190	2.153	1.771	0.940
1.60V/cell	A	39.5	25.0	18.85	14.80	10.45	5.93	4.24	3.363	2.425	1.613	1.083	0.889	0.470
	W	72.3	47.3	36.41	28.83	20.51	11.72	8.40	6.679	4.828	3.221	2.173	1.787	0.949

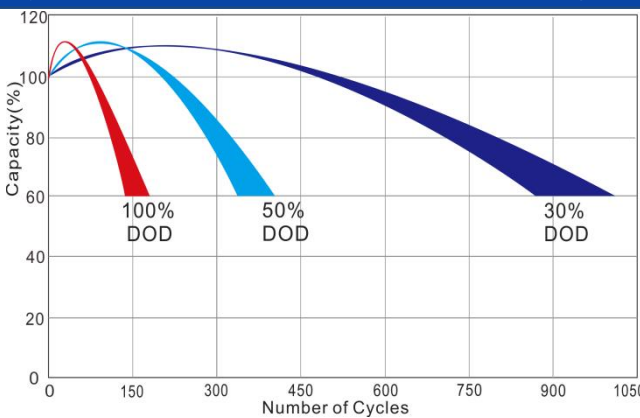
Discharge characteristic curve (25°C/77°F)



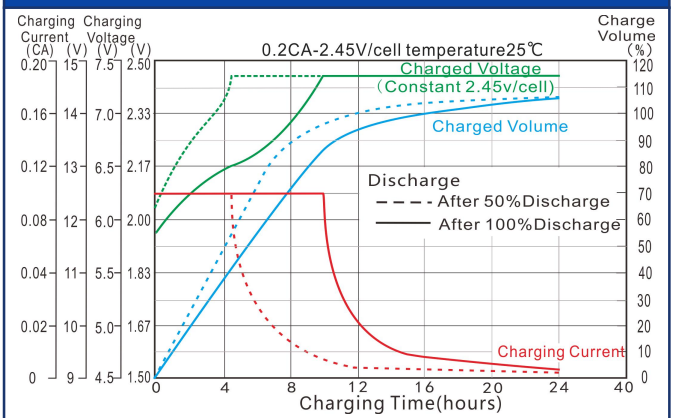
Charging characteristic curve of floating charge (25°C/77°F)



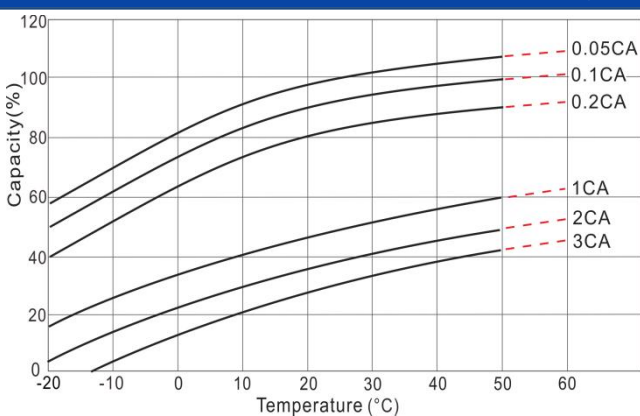
Cycle service life in relation to depth of discharge



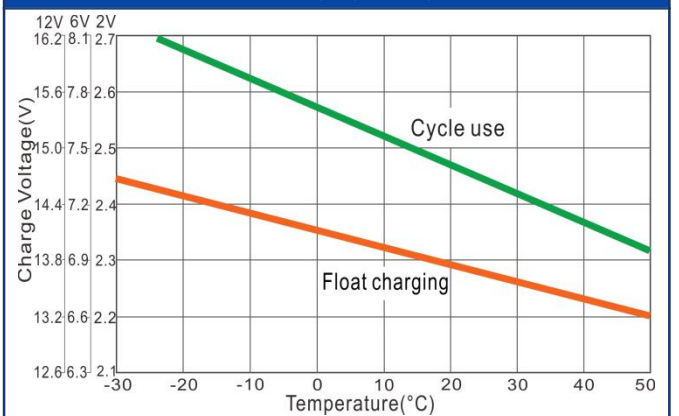
Cyclic charging characteristic curve (25°C/77°F)



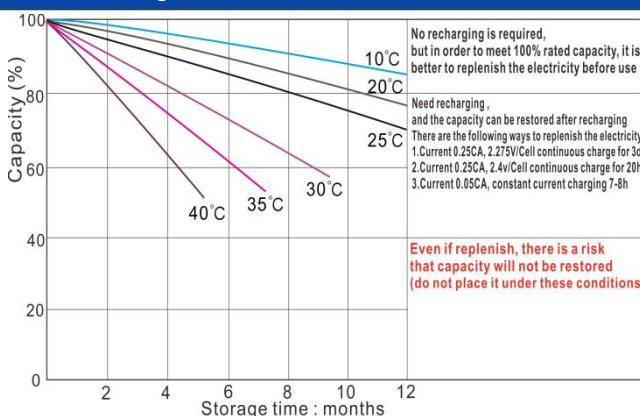
Relationship between temperature and capacity



Relationship between charging voltage and temperature



Self discharge characteristics



Temperature vs Float Life

