

## Specification



DC (Deep Cycle) series batteries provide superior high integrity and reliability. It is specially designed for frequent cyclic charge and discharging. By using strong grids, thick plate and specially active material are designed for repeated deep-discharge applications. The DC series batteries offer 30% more cyclic life than the standby series. It is suitable for solar and wind renewable energy storage, mobility and medical equipment and cable TV etc.



ISO 9001

ISO 14001

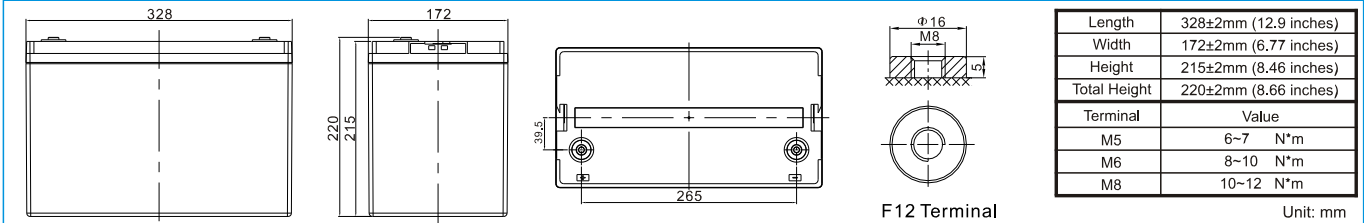
OHSAS 18001



MH 28539

<b>Capacity</b>	<b>110AH@ 10hr@ 25c</b> <b>114AH@ 20hr @ 25c</b> <b>130AH@ 100hr @25c</b>
<b>Weight</b>	Approx. 29.0 Kg (Tolerance $\pm 3.0\%$ )
<b>Internal Resistance</b>	Approx. 5.5 m $\Omega$
<b>Terminal</b>	F5(M8)/F12 (M8)
<b>Max. Discharge Current</b>	1140A (5 sec)
<b>Design Life</b>	12 years (floating charge)
<b>Max. Charging Current</b>	34.5 A
<b>Reference Capacity</b>	<b>110AH@ 10hr@ 25c</b> <b>114AH@ 20hr @ 25c</b> <b>130AH@ 100hr @25c</b>
<b>Float Charging Voltage</b>	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
<b>Cycle Use Voltage</b>	14.6 V~14.8 V @ 25°C Temperature Compensation: -4mV/°C/Cell
<b>Operating Temperature Range</b>	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
<b>Normal Operating Temperature Range</b>	25°C $\pm 5^\circ\text{C}$
<b>Self Discharge</b>	EXP Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charged batteries before using.
<b>Container Material</b>	A.B.S. UL94-HB, UL94-V0 Optional.

## Dimensions



### Constant Current Discharge Characteristics : A (25°C)

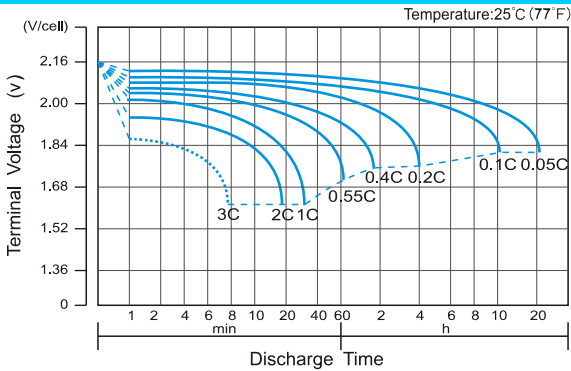
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR	24HR	48HR	72HR	100HR
1.60V	249.9	198.5	119.3	67.2	40.0	31.0	24.4	20.8	13.9	11.6	6.07	5.13	2.68	1.85	1.37
1.65V	236.2	189.8	114.5	64.9	38.8	30.1	23.7	20.2	13.8	11.5	7.07	5.06	2.65	1.83	1.35
1.70V	217.4	177.7	109.4	62.8	37.5	29.3	23.1	19.7	13.6	11.3	8.07	4.99	2.61	1.80	1.33
1.75V	199.0	165.4	104.6	60.5	36.2	28.4	22.5	19.2	13.4	11.1	9.07	4.92	2.58	1.78	1.31
1.80V	180.2	152.7	100.0	58.2	34.9	27.5	21.8	18.7	13.2	11.0	10.07	4.86	2.54	1.76	1.30
1.85V	147.2	126.7	86.1	52.2	32.0	25.4	20.3	17.4	12.4	10.4	11.07	4.57	2.39	1.65	1.22

### Constant Power Discharge Characteristics : WPC (25°C)

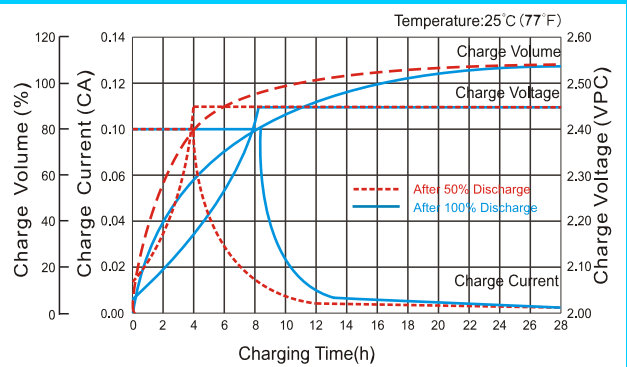
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR	24HR	48HR	72HR	100HR
1.60V	424.9	347.0	216.6	126.3	75.9	59.3	46.8	40.0	27.2	22.8	12.0	10.1	5.28	3.64	2.69
1.65V	409.2	336.6	210.1	122.7	73.8	57.7	45.7	39.1	27.0	22.6	11.8	9.97	5.22	3.60	2.66
1.70V	383.6	320.0	202.9	119.4	71.8	56.4	44.6	38.2	26.6	22.3	11.7	9.83	5.15	3.55	2.63
1.75V	357.5	302.1	195.9	115.8	69.6	54.9	43.7	37.4	26.3	22.0	11.5	9.71	5.08	3.51	2.59
1.80V	329.3	282.9	189.1	112.0	67.4	53.4	42.6	36.6	25.9	21.7	11.4	9.60	5.03	3.47	2.56
1.85V	273.9	238.1	164.5	101.0	62.1	49.6	39.7	34.2	24.4	20.5	10.9	9.05	4.74	3.27	2.42

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values. The battery must be fully charged before the capacity test. The C<sub>10</sub> should reach 95% after the first cycle and 100% after the third cycle.

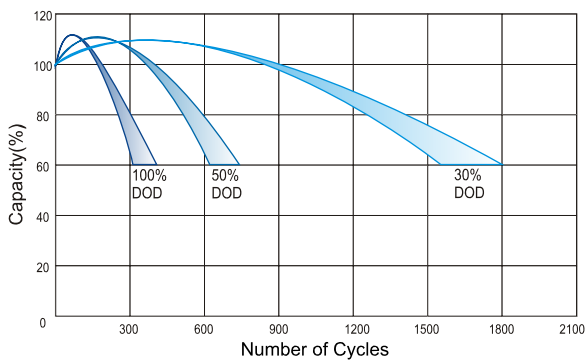
## Discharge Characteristics Curve



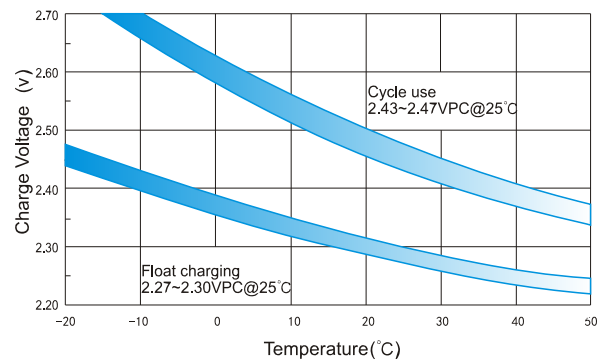
## Charge Characteristic Curve for Cycle Use(IU)



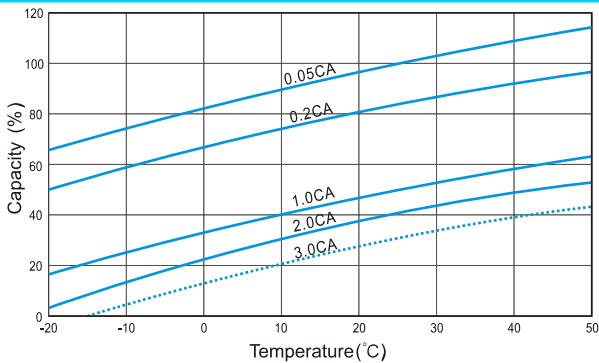
## Cycle Life in Relation to Depth of Discharge



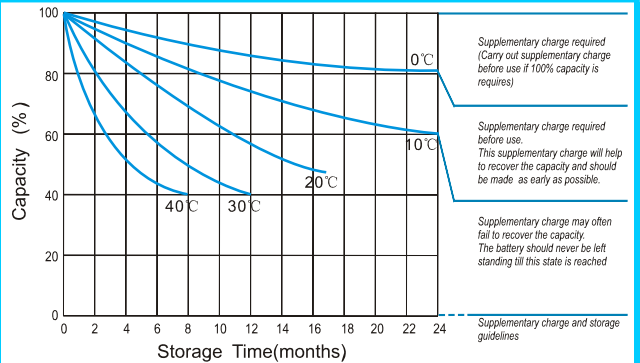
## Relationship Between Charging Voltage and Temperature



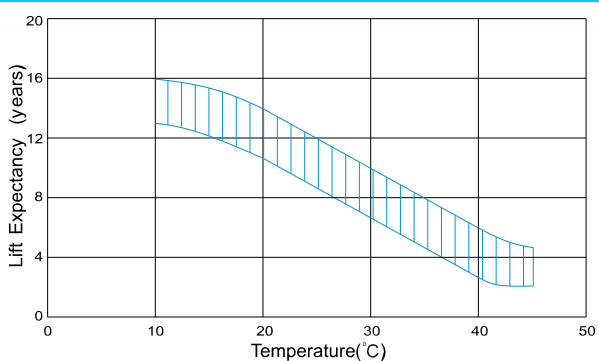
## Temperature Effects on Capacity



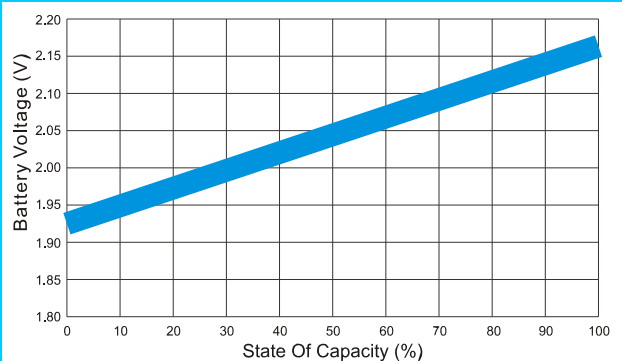
## Storage Characteristics



## Effect of Temperature on Long Term Life



## Relationship of OCV And State of Charge(20°C)



(Note) All above information shall be changed without prior notice, EXP reserves the right to explain and update the latest information.