

# DC12-100C(12V100Ah)



## Feature

DC-C series lead-carbon batteries use functional activated carbon and graphene as carbon materials, which are added to the negative plate of the battery to make lead carbon batteries have the advantages of both lead-acid batteries and super capacitors. It not only improves the ability of rapid charge and discharge, but also greatly prolongs the battery life. It is specially designed for daily heavy cyclic discharge use with feature low boost charge voltage, it should not be used under float charge, it must be charged and discharged daily for cyclic use. Especially suitable for the application of PSOC.

## Specification



<b>Cells Per Unit</b>	6
<b>Voltage Per Unit</b>	12
<b>Capacity</b>	100Ah@20hr-rate to 1.75V per cell @25°C
<b>Weight</b>	Approx. 31.0Kg (Tolerance ±3%)
<b>Internal Resistance</b>	Approx. 5.5 mΩ
<b>Terminal</b>	F12(M8)/F5(M8)
<b>Max. Discharge Current</b>	1000A (5 sec)
<b>Design Life</b>	15 years
<b>Max. Charging Current</b>	40.0 A
<b>Cycle Use Voltage</b>	13.8 V~14.0 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±5°C
<b>Self Discharge</b>	The batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 4% at 25°C. Please charged batteries before using.
<b>Container Material</b>	A.B.S. White/Red. UL94-HB/UL94-V0.

## Application

- ◆ Home energy storage system
- ◆ Smart power grid and micro-grid system
- ◆ Distributed energy storage system
- ◆ Solar and wind energy storage system
- ◆ Solar power generation grid or off-grid energy storage system
- ◆ Generation and battery hybrid energy storage system
- ◆ .....



ISO 9001



ISO 14001



OHSAS 18001



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

F.V/Time	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR	48HR	72HR	100HR	120HR
1.60V	55.5	32.5	24.2	19.1	16.1	11.0	9.66	5.22	2.23	1.53	1.13	0.96
1.65V	54.4	31.9	23.8	18.9	15.9	10.9	9.56	5.17	2.21	1.51	1.11	0.95
1.70V	53.0	31.2	23.3	18.5	15.7	10.7	9.43	5.10	2.18	1.49	1.10	0.94
1.75V	51.1	30.2	22.6	18.0	15.3	10.5	9.25	5.00	2.14	1.47	1.08	0.92
1.80V	48.5	28.8	21.7	17.4	14.8	10.2	9.00	4.86	2.08	1.43	1.05	0.89
1.85V	44.8	26.8	20.4	16.4	14.0	9.72	8.64	4.67	2.00	1.37	1.01	0.86

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

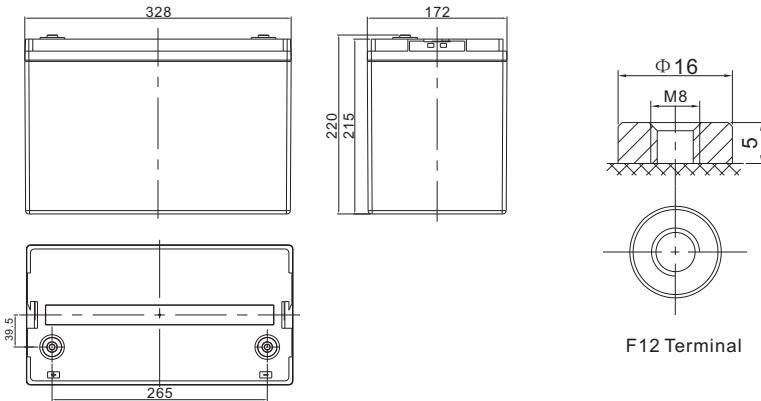
F.V/Time	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR	48HR	72HR	100HR	120HR
1.60V	103.7	61.6	46.2	36.8	31.1	21.5	19.0	10.3	4.39	3.01	2.21	1.88
1.65V	102.8	61.0	45.8	36.4	30.9	21.3	18.8	10.2	4.36	2.98	2.19	1.87
1.70V	100.5	59.7	44.9	35.8	30.4	21.0	18.6	10.0	4.30	2.94	2.17	1.84
1.75V	97.4	58.1	43.8	35.0	29.8	20.6	18.3	9.87	4.22	2.89	2.13	1.81
1.80V	92.9	55.7	42.2	33.9	28.9	20.1	17.8	9.61	4.11	2.82	2.07	1.76
1.85V	86.4	52.1	39.7	32.1	27.6	19.2	17.1	9.23	3.95	2.71	1.99	1.69

(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>20</sub> should reach 95% after the first cycle and 100% after the third cycle.

# DC12-100(12V100Ah)



## Dimensions



Unit: mm

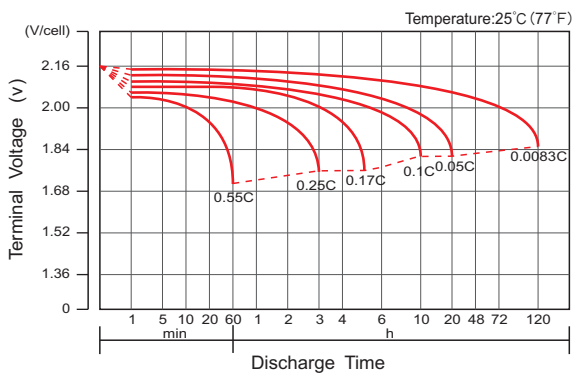
Length	328±2mm (12.9 inches)
Width	172±2mm (6.77 inches)
Height	215±2mm (8.46 inches)
Total Height	220±2mm (8.66 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

## Reference Capacity

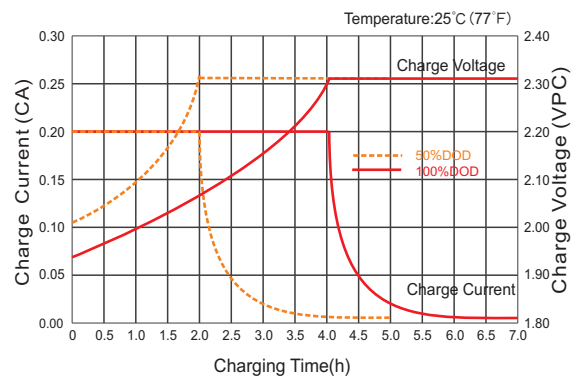
Hour Rate	C20 (Ah)	C72 (Ah)	C100 (Ah)	C120 (Ah)
F.V (V/Cell)	1.75	1.85	1.85	1.85
Capacity (Ah)	100.0	98.6	101.0	103.2

## Characteristic Curve

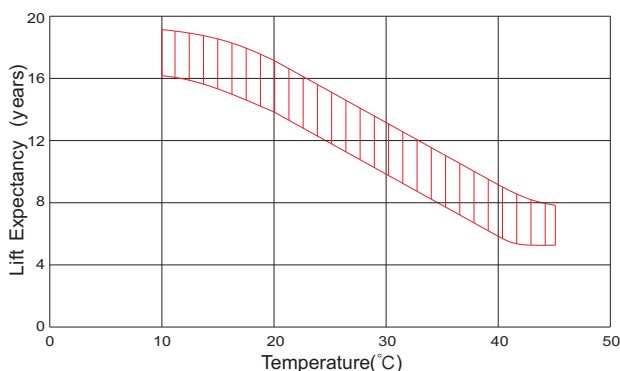
Discharge Characteristics Curve



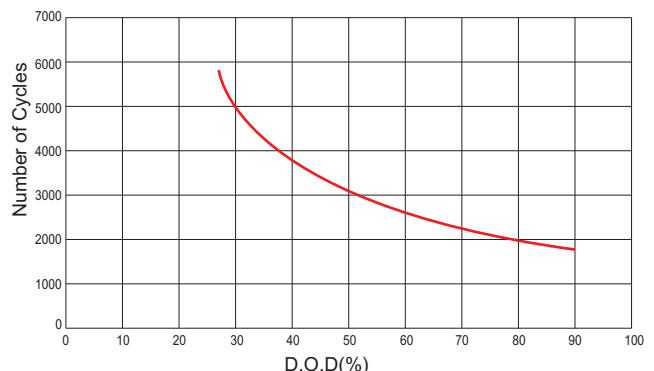
Charge Characteristic Curve for Cycle Use(IU)



Effect of Temperature on Long Term Life



Cycle Life in Relation to Depth of Discharge



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