

MODEL: DPC12-100 (12V 100AH@C20HR)

Feature

DPC 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, Especially suitable for the application of PSOC.

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	100Ah@20hr-rateto1.75Vpercell@25°C
Weight	Approx. 29.0Kg (Tolerance ±3%)
Internal Resistance	Approx. 5 .5 mΩ
Terminal	F12(M8)/F5(M8)
Max. Discharge Current	1000A (5 sec)
Design Life	15 years
Max. Charging Current	40.0 A
Cycle Use Voltage	13.8 V~14.0V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge:-20°C~60°C Charge:0°C~50°C Storage:-20°C~60°C
Normal Operating Temperature Range	25°C ± 5°C
Self Discharge	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 3% at 25°C, Please charged batteries before using.
Container Material	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



Constant Current Discharge Characteristics : A(25°C)

F. V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	167.8	136.1	89.3	55.7	34.0	25.5	20.3	17.1	11.5	9.52	5.20
1.65V	158.6	130.1	85.7	53.8	32.9	24.7	19.8	16.6	11.4	9.40	5.12
1.70V	146.0	121.9	81.9	52.0	31.8	24.0	19.3	16.2	11.2	9.26	5.06
1.75V	133.6	113.4	78.3	50.1	30.7	23.3	18.8	15.8	11.1	9.14	5.00
1.80V	121.0	104.7	74.9	48.2	29.6	22.6	18.2	15.4	10.9	9.02	4.95
1.85V	98.9	86.9	64.5	43.2	27.1	20.9	16.9	14.3	10.2	8.49	4.70

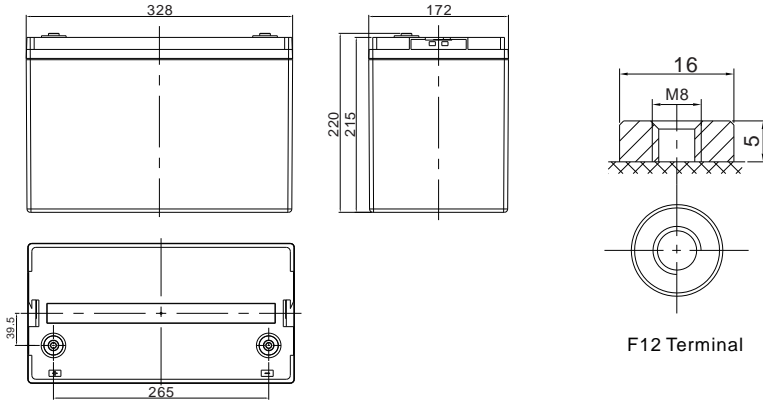
Constant Power Discharge Characteristics : WPC(25°C)

F. V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	324.2	270.4	184.3	118.9	73.3	55.3	44.4	37.4	25.6	21.3	11.6
1.65V	308.4	259.9	178.5	115.6	71.3	54.0	43.4	36.6	25.3	21.0	11.5
1.70V	292.7	249.4	172.6	112.4	69.3	52.6	42.3	35.7	25.0	20.7	11.4
1.75V	272.8	235.4	166.7	108.9	67.2	51.3	41.4	34.9	24.7	20.5	11.2
1.80V	251.2	220.4	160.9	105.4	65.1	49.9	40.4	34.2	24.4	20.3	11.1
1.85V	209.0	185.5	140.0	95.1	60.0	46.3	37.6	32.0	22.9	19.1	10.6

(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 C₂₀ should reach 95% after the first cycle and 100% after the third cycle.

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Dimensions



Unit: mm

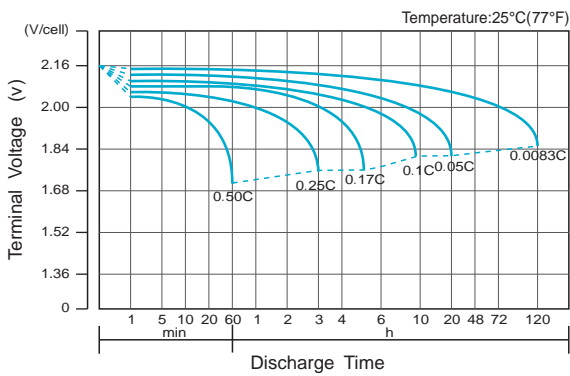
Length	328±2mm (12.9 inches)
Width	172±2mm (6.77 inches)
Height	215±2mm (8.46 inches)
Total Height	220±2mm (8.66 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

Reference Capacity

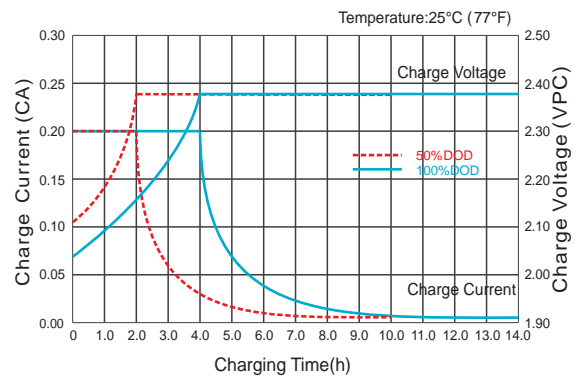
Hour Rate	C20 (Ah)	C72 (Ah)	C100 (Ah)	C120 (Ah)
F.V (V/Cell)	1.75	1.85	1.85	1.85
Capacity (Ah)	100.0	103.6	106.2	107.8

Characteristic Curve

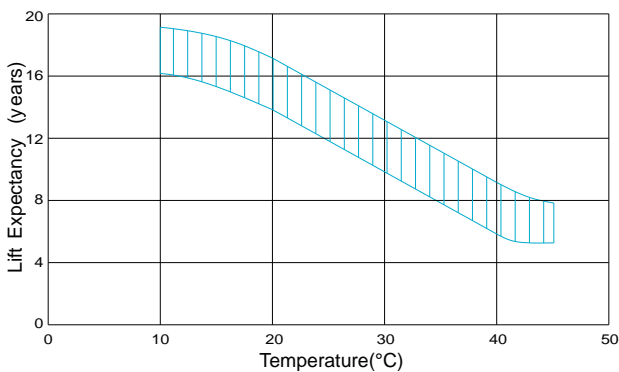
Discharge Characteristics Curve



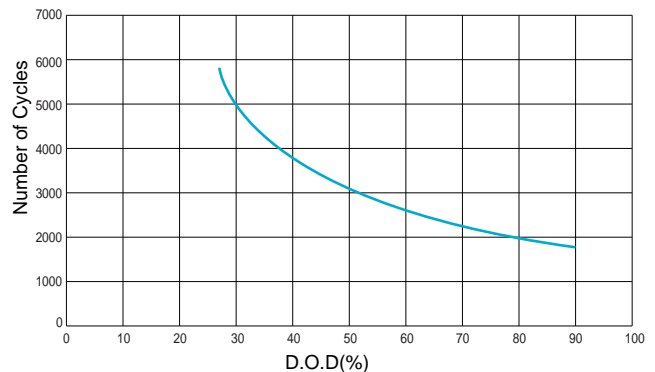
Charge Characteristic Curve for Cycle Use(IU)



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, Duravolt reserves the right to explain and update the latest information.