

Lead-Carbon Battery

MDC100-12

Applications

- › Solar / wind energy and other new energy storage
- › Hybrid vehicles, electric bicycles and other new energy vehicles
- › Other backup or cycle purposes

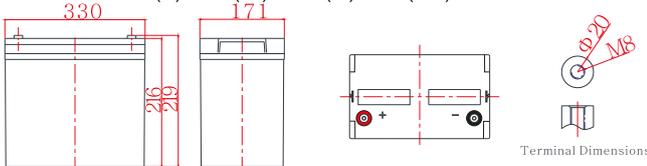


General Features

- › Lead-carbon composite negative plate, both capacitance and battery characteristics
- › Long cycle life, excellent deep cycle discharge ability
- › Excellent charge acceptance ability
- › Optimized capability of instant high-current discharging
- › Strong high and low temperature performance
- › Precision sealing technology



Dimension: 330(L) × 171(W) × 216(H) × 219(TH) Unit: mm



Specification

Nominal Voltage	12V
Nominal Capacity	100Ah
Design life	15 years
Terminal	M8
Approx. Weight	Approx 32.0kg (70.5lbs)
Container Material	ABS
Rated Capacity	11.0Ah 20Hour Rate (5.5A to 10.8V)
	100Ah 10Hour Rate (10.1A to 10.8V)
	81.3Ah 3Hour Rate (27.1A to 10.8V)
Internal resistance	Full charged at 25°C: 4.8 mΩ
Max. Discharge Current	1200A(5S)
Operating Temperature	Discharge: -40 ~60°C (-40 ~ 140°F)
	Charge: -20 ~50°C (-4 ~ 122°F)
	Storage: -20 ~50°C (-4 ~ 122°F)
Charge Method (25°C)	Charge current: Max.30.0A ; Recom.10.0~20.0A
	Float Charge: 13.5-13.8V, recom.13.5V(-18mV/°C)
	Equalize charge: 13.8-14.1V, recom.14.1V(-24mV/°C)
	Cycle charge: 14.4-15.0V, recom.14.4V(-30mV/°C)
Self discharge	3% of capacity declined per month at 25°C

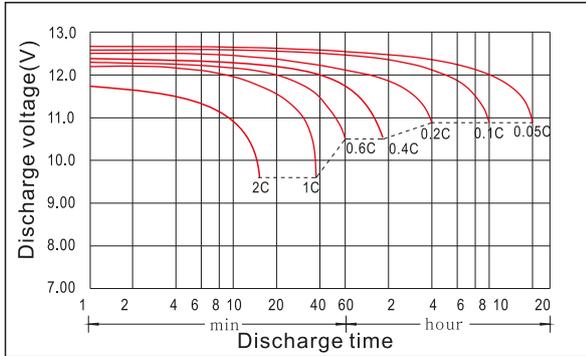
Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

FV/Time	5min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V	359	193	117	68.0	39.0	28.3	19.0	12.5	10.5	5.51
1.65V	348	187	115	67.6	38.8	28.0	18.8	12.4	10.4	5.48
1.70V	335	183	113	67.1	38.5	27.6	18.6	12.3	10.3	5.45
1.75V	308	177	112	66.1	37.9	27.3	18.4	12.2	10.2	5.43
1.80V	276	165	108	64.4	37.2	27.1	17.9	12.1	10.0	5.40
1.85V	246	147	98.2	59.7	35.3	25.5	17.0	11.6	9.80	5.31

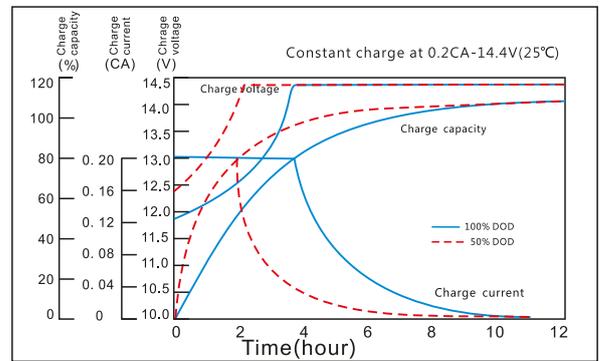
Constant Power Discharge Characteristics Unit: W/cell (25°C, 77°F)

FV/Time	5min	15min	30min	1h	2h	3h	5h	8h	10h	20h
1.60V	603	340	213	129	73.7	53.8	36.0	24.2	20.2	10.9
1.65V	580	334	211	128	73.5	53.2	35.8	24.0	20.0	10.9
1.70V	577	330	211	127	73.2	52.9	35.5	23.9	19.8	10.8
1.75V	538	328	210	126	72.8	52.6	35.3	23.7	19.6	10.8
1.80V	494	310	205	125	72.7	52.4	34.9	23.5	19.4	10.7
1.85V	441	277	188	116	69.4	49.8	33.4	22.8	19.1	10.6

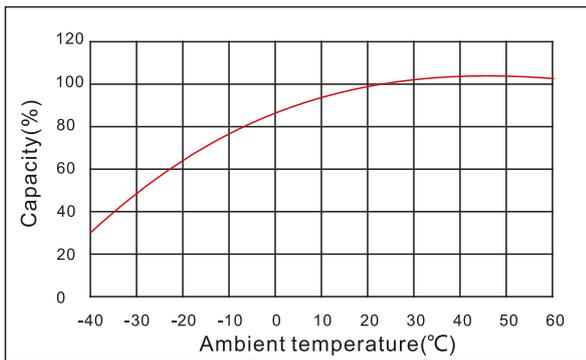
Discharge characteristic



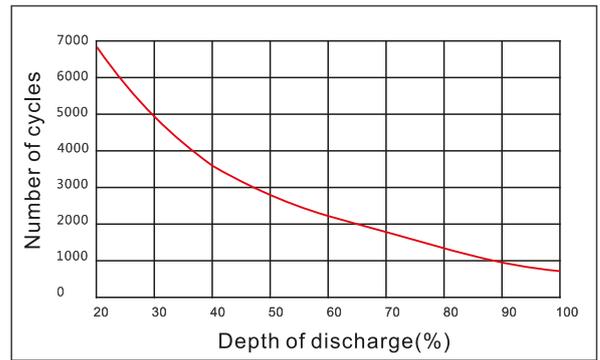
Charging characteristic



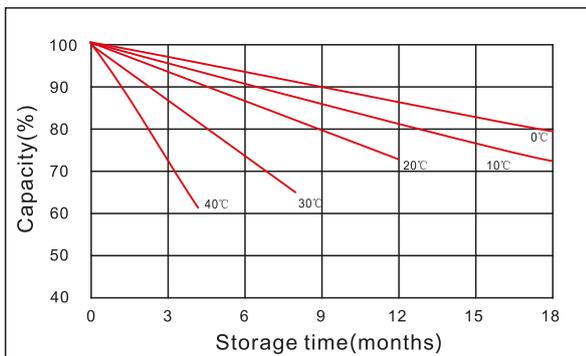
The effect of temperature on capacity



The effect of discharge depth on cycle life



Curves of self-discharge



Curves of open circuit voltage vs. capacity

