

MADE IN INDIA

SU=mak[®]
SOLAR

GEL BATTERY

SEALED MAINTENANCE FREE BATTERY

100Ah - 200Ah

DEEP
DISCHARGE
TECHNOLOGY



www.sumaksolar.com

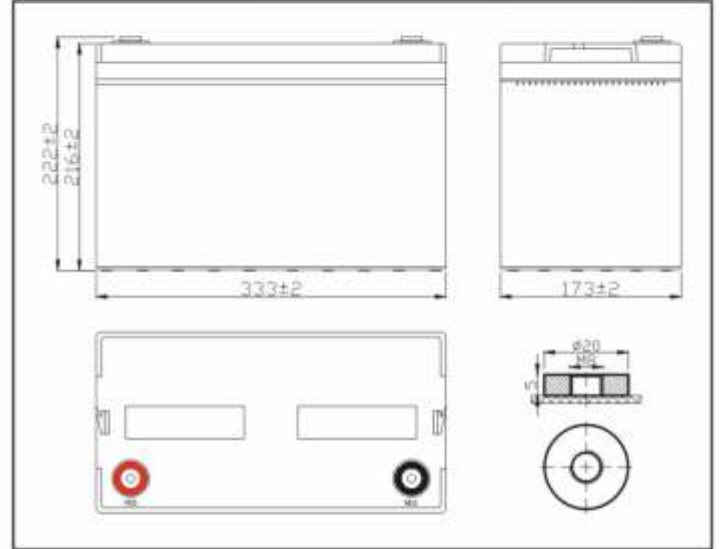
100AH

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Plane Chart:

Unit:(mm) Terminal type:(T3)



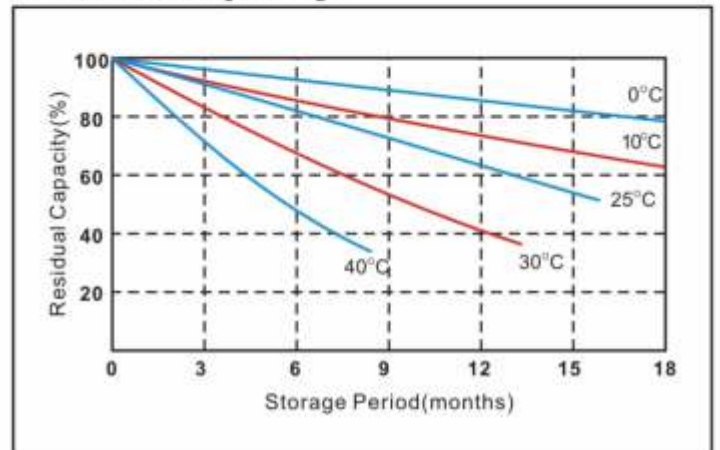
ISO 9001
ISO 14001
OHSAS18001



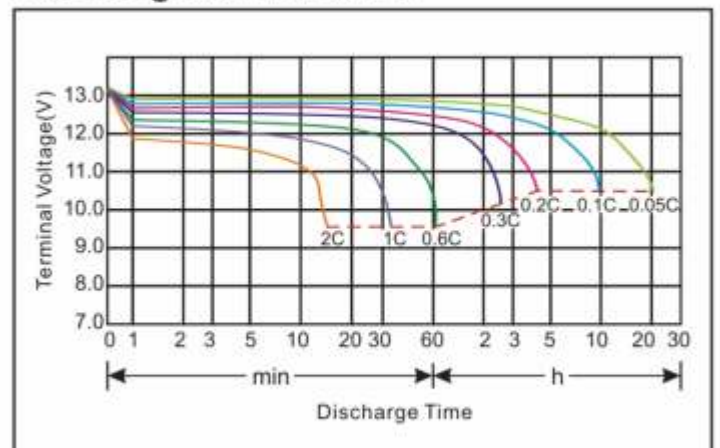
Parameter Chart:

Volts		12V
Capacity(25°C)	10 hours rate (10A)	100Ah
Discharge Current Testing (25°C)	1 hours rate (55A)	57Ah
	3 hours rate (25A)	77Ah
Internal Resistance	Full Charged Battery 25°C	4.2mΩ
Capacity Affected By Temperature	40°C	104%
	25°C	100%
	0°C	83%
	-15°C	65%
Residual Capacity (25°C)	Capacity After 3 Months Storage	91%
	Capacity After 6 Months Storage	82%
	Capacity After 12 Months Storage	65%
Charge (Constant Voltage)	Cycle (25°C)	Initial Charging Current Less Than 30A Voltage 14.5~14.9V
	Float (25°C)	Charge Voltage 13.6~13.8V
Weight (Approx)		30.5Kg

Residual Capacity

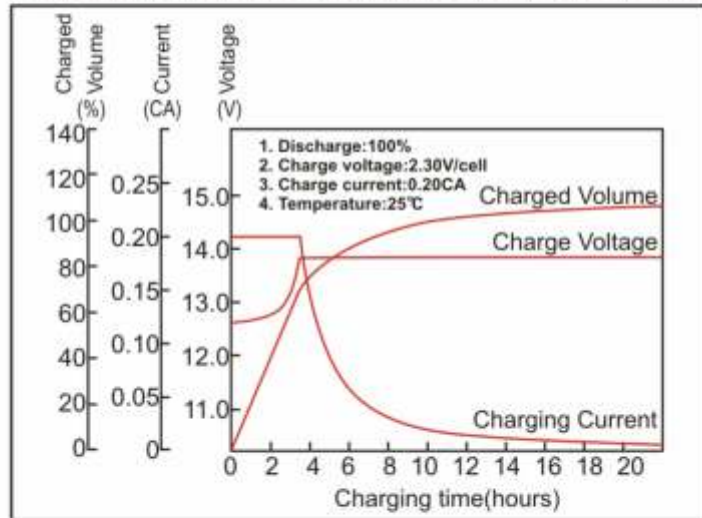


Discharge Current 25°C

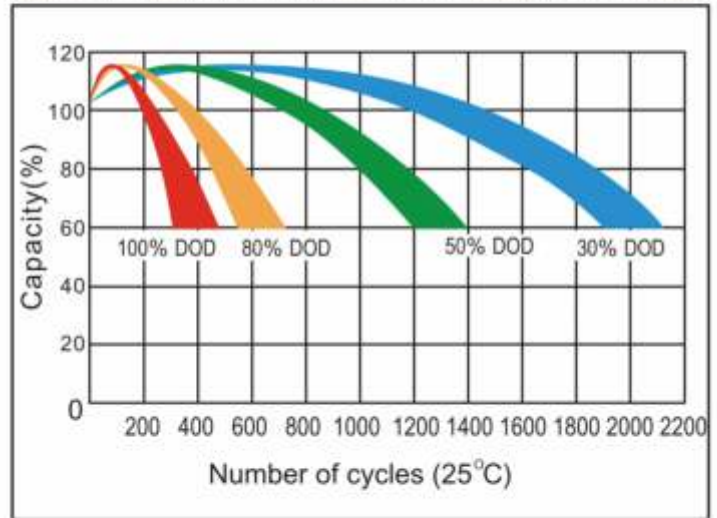


★ The above are average and data obtained from the first 3 charge/discharge cycles. These are not minimum values.

Constant voltage charging characteristics



Cycle service life in relation to the depth of discharge



Constant Current Discharge Characteristics (A, 25°C)

F.V/Time	10min	15min	30min	60min	2h	3h	5h	8h	10h	20h
9.60V	217.8	173.3	106.9	64.4	36.1	26.1	18.3	12.1	10.1	5.4
10.2V	206.9	166.3	103.0	61.8	35.6	25.7	18.0	12.0	10.0	5.3
10.5V	201.0	162.4	100.0	60.5	35.3	25.5	17.8	12.0	10.0	5.3
10.8V	194.0	158.4	97.8	58.7	34.9	25.2	17.6	11.9	10.0	5.2

Constant Power Discharge Characteristics (Watt, 25°C)

F.V/Time	10min	15min	30min	60min	2h	3h	5h	8h	10h	20h
9.60V	2352.2	1902.8	1199.9	733.6	418.8	306.9	216.8	144.5	121.8	64.3
10.2V	2234.4	1826.6	1155.3	703.9	412.8	302.9	212.9	143.9	120.8	63.6
10.5V	2170.1	1782.0	1145.4	699.9	408.9	300.0	209.9	143.6	119.8	63.4
10.8V	2095.8	1739.4	1097.9	669.2	404.9	297.0	207.9	142.6	118.2	63.0

Capacity Factors With Different Temperature

Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL Battery	12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%

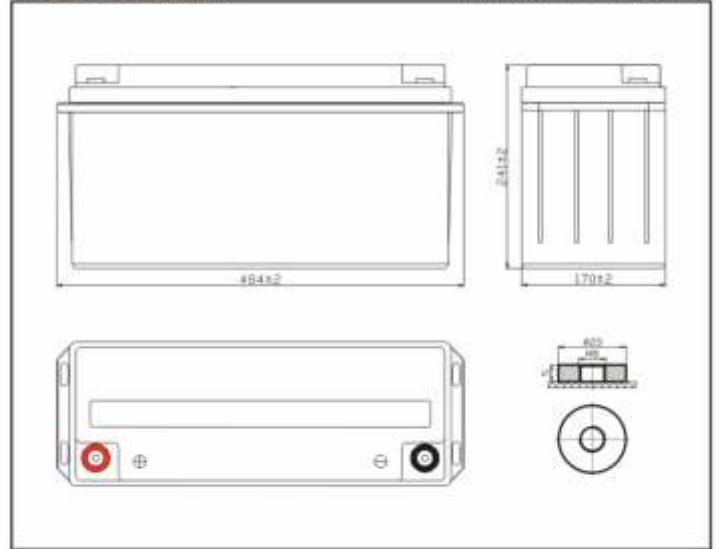
★The above are average and data obtained from the first 3 charge/discharge cycles. These are not minimum values.

150AH



Plane Chart:

Unit:(mm) Terminal type:(T3)



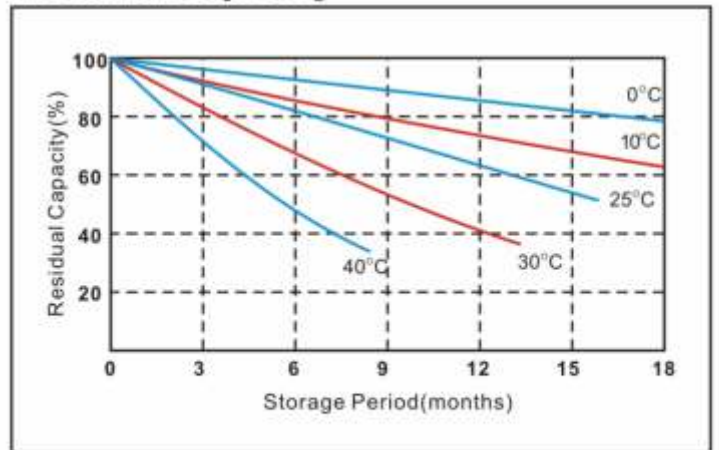
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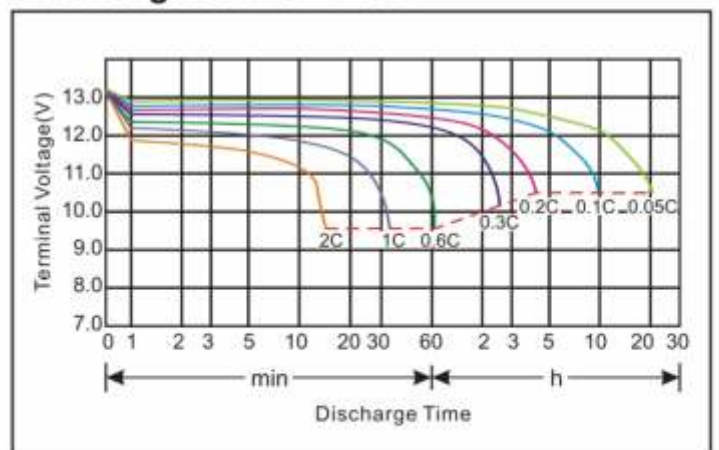
Parameter Chart:

Volts		12V
Capacity(25°C)	10 hours rate (15A)	150Ah
Discharge Current Testing (25°C)	1 hours rate (82.5A)	83Ah
	3 hours rate (37.5A)	113Ah
Internal Resistance	Full Charged Battery 25°C	3.4mΩ
Capacity Affected By Temperature	40°C	104%
	25°C	100%
	0°C	83%
	-15°C	65%
Residual Capacity (25°C)	Capacity After 3 Months Storage	91%
	Capacity After 6 Months Storage	82%
	Capacity After 12 Months Storage	65%
Charge (Constant Voltage)	Cycle (25°C)	Initial Charging Current Less Than 45A Voltage 14.5~14.9V
	Float (25°C)	Charge Voltage 13.6~13.8V
Weight (Approx)		42.5Kg

Residual Capacity

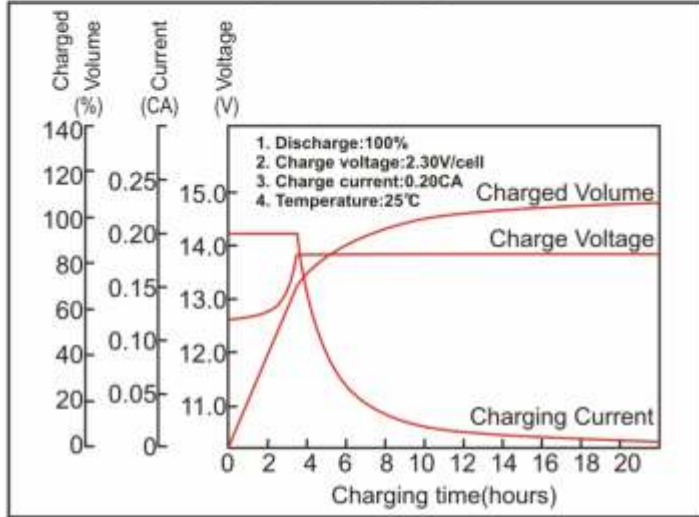


Discharge Current 25°C

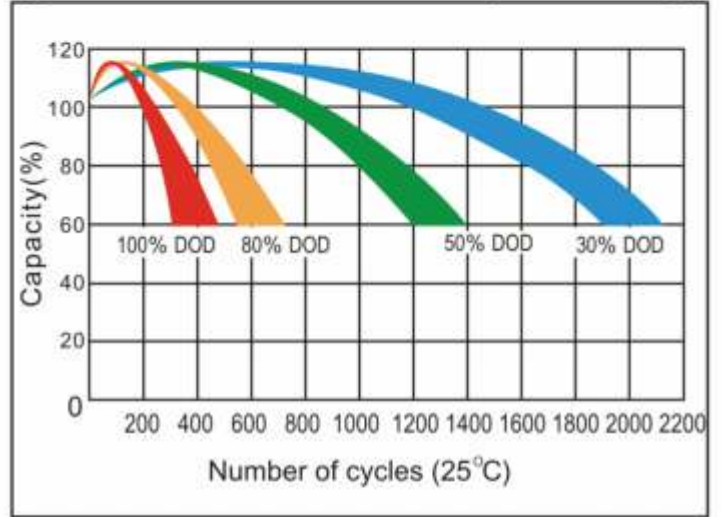


★ The above are average and data obtained from the first 3 charge/discharge cycles. These are not minimum values.

Constant voltage charging characteristics



Cycle service life in relation to the depth of discharge



Constant Current Discharge Characteristics (A, 25°C)

F.V/Time	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	267.3	158.4	96.5	54.3	39.2	31.1	27.3	18.1	15.1	7.9
10.2V	256.4	152.5	92.7	53.5	38.6	30.7	26.9	17.9	15.1	7.8
10.5V	251.5	148.5	90.8	53.0	38.2	30.5	26.6	17.8	15.0	7.7
10.8V	243.5	144.5	88.0	52.4	37.8	29.5	26.4	17.8	15.0	7.7

Constant Power Discharge Characteristics (Watt, 25°C)

F.V/Time	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	2935.4	1777.1	1100.9	628.7	461.3	365.3	322.7	214.8	181.2	94.5
10.2V	2815.6	1710.7	1056.3	618.8	454.4	360.4	318.8	212.9	179.2	93.9
10.5V	2760.1	1666.2	1034.6	612.8	449.5	358.4	314.8	211.9	178.2	93.2
10.8V	2674.0	1621.6	1002.9	606.9	445.5	347.5	312.8	210.9	177.2	92.7

Capacity Factors With Different Temperature

Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL Battery	12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%

★The above are average and data obtained from the first 3 charge/discharge cycles. These are not minimum values.

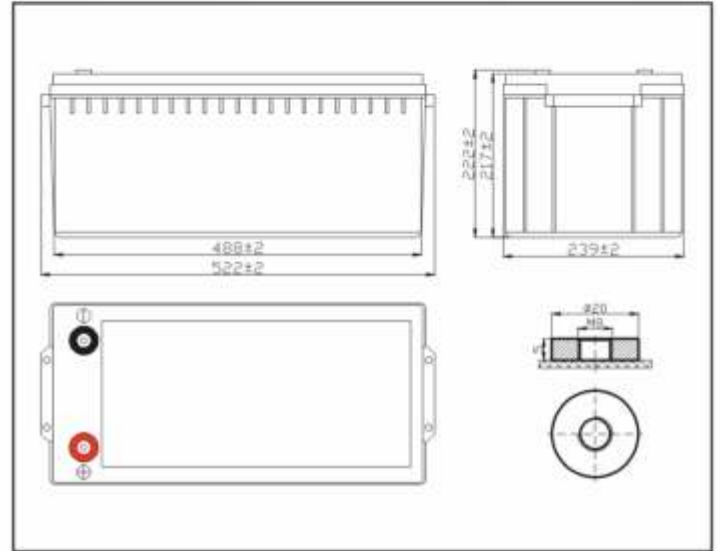
200AH

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Plane Chart:

Unit:(mm) Terminal type:(T3)



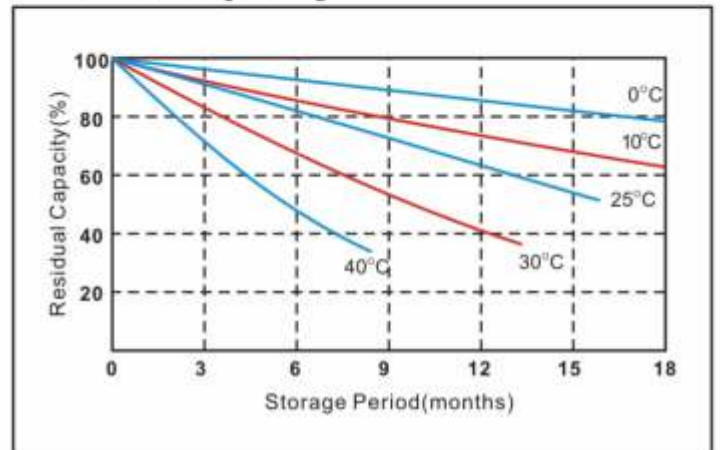
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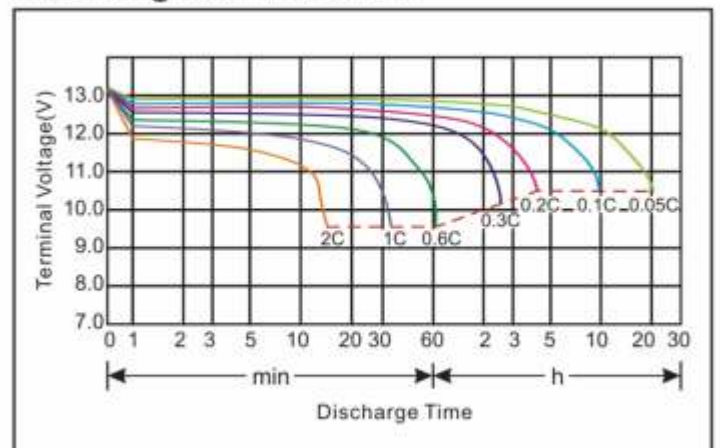
Parameter Chart:

Volts		12V	
Capacity(25°C)	10 hours rate (20A)	200Ah	
Discharge Current Testing (25°C)	1 hours rate (110A)	110Ah	
	3 hours rate (50A)	150Ah	
Internal Resistance	Full Charged Battery 25°C	3.2mΩ	
Capacity Affected By Temperature	40°C	104%	
	25°C	100%	
	0°C	83%	
	-15°C	65%	
Residual Capacity (25°C)	Capacity After 3 Months Storage	91%	
	Capacity After 6 Months Storage	82%	
	Capacity After 12 Months Storage	65%	
Charge (Constant Voltage)	Cycle (25°C)	Initial Charging Current Less Than 60A Voltage 14.5~14.9V	
	Float (25°C)	Charge Voltage 13.6~13.8V	
Weight (Approx)		60.2Kg	

Residual Capacity

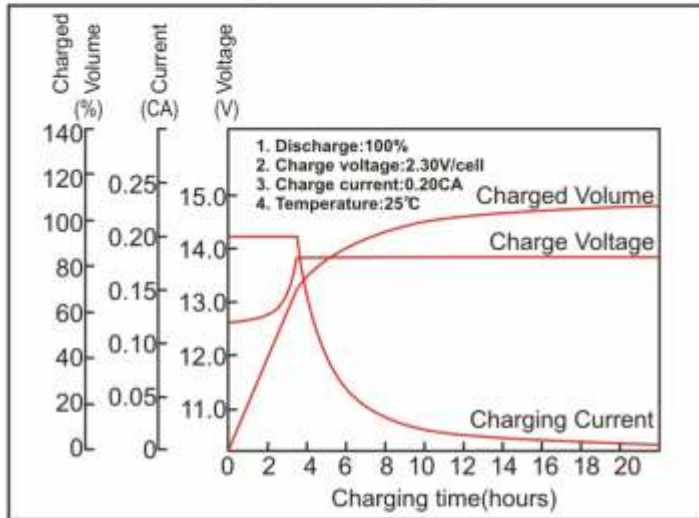


Discharge Current 25°C

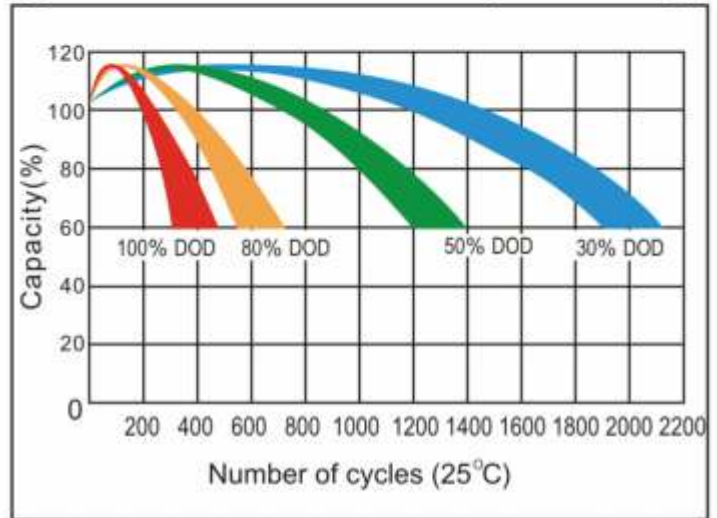


★ The above are average and data obtained from the first 3 charge/discharge cycles. These are not minimum values.

Constant voltage charging characteristics



Cycle service life in relation to the depth of discharge



Constant Current Discharge Characteristics (A, 25°C)

F.V/Time	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	366.3	207.9	128.7	72.4	54.5	41.4	37.8	24.1	20.1	10.2
10.2V	351.5	200.0	123.8	71.3	53.0	40.9	36.6	23.9	20.1	10.2
10.5V	344.5	195.0	120.8	70.7	52.6	40.6	36.3	23.8	20.0	10.1
10.8V	333.6	190.1	117.8	69.8	51.9	39.4	35.9	23.5	20.0	10.1

Constant Power Discharge Characteristics (Watt, 25°C)

F.V/Time	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	4022.4	2332.4	1467.2	837.5	632.6	487.1	439.6	285.1	239.6	122.8
10.2V	3861.0	2239.4	1410.8	824.7	622.7	481.1	432.6	283.1	238.5	121.8
10.5V	3782.8	2187.9	1376.1	817.7	617.8	477.2	428.7	282.2	237.6	120.8
10.8V	3686.0	2127.5	1338.5	807.8	610.8	463.3	424.7	278.2	236.8	120.8

Capacity Factors With Different Temperature

Battery Type		-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
GEL Battery	12V	50%	70%	83%	85%	90%	98%	100%	102%	104%	105%

★The above are average and data obtained from the first 3 charge/discharge cycles. These are not minimum values.

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