

GP1280F2 12V 8.0 Ah



Specification

Cells Per Unit	6
Voltage Per Unit	12
Nominal Capacity	8Ah@20hour-rate to 1.75V per cell @25°C
Weight	Approx. 2.08 Kg (Tolerance ± 5.0%)
Internal Resistance	Approx. 30 mΩ
Terminal	F1/F2
Max. Discharge Current	80A (5 sec)
Short Circuit Current	375A
Design Life	6~8 years (Float charging)
Max. Charging Current	2.4 A
Reference Capacity	C3 6.19AH C5 6.98AH C10 7.48AH C20 8.00AH
Standby Use Voltage	13.7 V~13.9 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 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	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 charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

series is a general purpose battery with 6~8 years design life in float service. It meets with IEC, JIS, BS ,GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.



ISO 9001



ISO 14001



OHSAS 18001

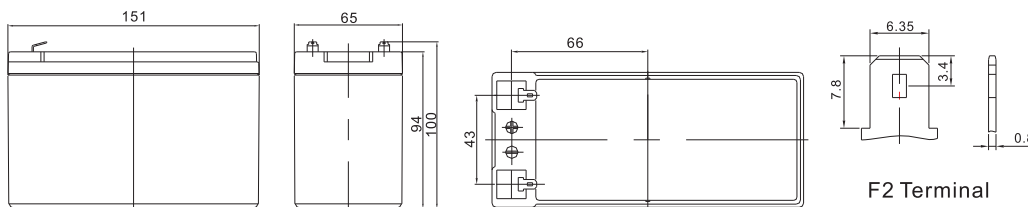


MH 28539



G4M20206-0910-E-16

Dimensions



Length	151±1.5mm (5.94 inches)
Width	65±1.5mm (2.56 inches)
Height	94±1.5mm (3.70 inches)
Total Height	100±1.5mm (3.94 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

Unit: mm

Constant Current Discharge Characteristics : A (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	30.35	21.45	15.51	8.907	4.888	3.001	2.256	1.821	1.509	0.971	0.789	0.417
1.65V	28.23	20.27	14.83	8.551	4.720	2.905	2.186	1.772	1.470	0.960	0.779	0.410
1.70V	25.47	18.66	13.89	8.173	4.567	2.810	2.127	1.724	1.432	0.946	0.767	0.405
1.75V	22.82	17.08	12.92	7.812	4.400	2.711	2.063	1.680	1.396	0.932	0.757	0.400
1.80V	20.03	15.46	11.93	7.466	4.231	2.614	2.000	1.632	1.360	0.917	0.748	0.396
1.85V	15.90	12.64	9.901	6.430	3.795	2.395	1.849	1.516	1.268	0.860	0.704	0.376

Constant Power Discharge Characteristics : WPC (25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	50.32	36.46	27.11	16.18	9.185	5.688	4.309	3.497	2.909	1.897	1.551	0.820
1.65V	47.33	35.12	26.30	15.69	8.921	5.533	4.193	3.415	2.844	1.879	1.534	0.808
1.70V	43.68	32.93	25.00	15.15	8.685	5.380	4.098	3.334	2.780	1.855	1.513	0.800
1.75V	40.00	30.68	23.61	14.63	8.418	5.216	3.992	3.261	2.719	1.833	1.495	0.791
1.80V	35.87	28.26	22.10	14.12	8.143	5.055	3.884	3.179	2.658	1.806	1.477	0.784
1.85V	29.07	23.51	18.60	12.29	7.348	4.657	3.607	2.966	2.487	1.699	1.393	0.745

(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.

Number of Cycles	Capacity (%) - 100% DOD	Capacity (%) - 50% DOD	Capacity (%) - 30% DOD
0	100	100	100
100	110	110	110
200	60	105	108
400	-	90	105
500	-	60	102
800	-	-	95
1200	-	-	60

Figure 1 is a line graph showing the relationship between Charge Voltage (V) on the Y-axis and Temperature (°C) on the X-axis. The Y-axis ranges from 2.20 to 2.70 V, and the X-axis ranges from -20 to 50 °C. Two shaded regions represent different charging methods:

- Cycle use:** 2.43~2.47VPC@25°C (Red shaded area)
- Float charging:** 2.28~2.32VPC@25°C (Purple shaded area)

Both regions show a decrease in charge voltage as temperature increases.

Temperature (°C)	0.05 CA (%)	0.2 CA (%)	1.0 CA (%)	2.0 CA (%)	3.0 CA (%)
-20	65	50	18	0	0
-10	75	60	25	5	0
0	85	70	32	15	10
10	95	80	40	25	20
20	105	90	48	35	30
30	115	100	55	45	40
40	120	105	60	50	45
50	125	110	65	55	50

The graph illustrates the relationship between storage time and capacity for different temperatures. The y-axis represents Capacity (%) from 0 to 100, and the x-axis represents Storage Time (months) from 0 to 24. Five curves are shown for temperatures of 0°C, 10°C, 20°C, 30°C, and 40°C. The 0°C curve shows the least capacity loss, while the 40°C curve shows the most rapid decline. Annotations provide guidance on when to perform supplementary charging based on the temperature and the resulting capacity loss.

Storage Time (months)	0°C Capacity (%)	10°C Capacity (%)	20°C Capacity (%)	30°C Capacity (%)	40°C Capacity (%)
0	100	100	100	100	100
2	98	95	85	75	65
4	96	90	75	60	50
6	94	85	68	50	40
8	92	80	62	45	35
10	90	75	58	40	30
12	88	70	54	35	25
14	86	65	50	30	20
16	84	60	46	25	15
18	82	55	42	20	10
20	80	50	38	15	5
22	78	45	34	10	0
24	76	40	30	5	0

Testing conditions: float charging

Temperature: 25°C(77°F)

Capacity (%)

Life expectancy (years)

Life expectancy (years)	Capacity (%)
0	100
1.5	95
3.0	90
4.5	80
6.0	70
7.5	60
9.0	50