



# GP12140F2

12V 14 Ah



## Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	14 AH	
Dimension	Length	151 ± 1mm (5.95 inches)
	Width	98 ± 1mm (3.86 inches)
	Container Height	95 ± 1mm (3.74 inches)
	Total Height (with Terminal)	100± 1mm (3.94 inches)
Approx Weight	Approx 3.4kg (7.5lbs)	
Terminal	T1 / T2	
Container Material	ABS	
Rated Capacity	14.0 AH/0.60A	(20hr, 1.80V/cell, 25°C)
	11.2 AH/1.12A	(10hr, 1.80V/cell, 25°C)
	10.2 AH/2.04A	(5hr, 1.75V/cell, 25°C)
	9.2 AH/3.06A	(3hr, 1.75V/cell, 25°C)
	7.54AH/7.54A	(1hr, 1.60V/cell, 25°C)
Max. Discharge Current	190A (5s)	
Internal Resistance	Approx 17 mΩ	
Operating Temp. Range	Discharge : -15 ~ 50°C	
	Charge : 0 ~ 40°C	
	Storage : -15 ~ 40°C	
Nominal Operating Temp. Range	25 ± 3°C	
Cycle Use	Initial Charging Current less than 3.6 A. Voltage 14.4V~15.0V at 25°C	
Standby Use	No limit on Initial Charging Current Voltage	
	13.5V~13.8V at 25°C	
Capacity affected by Temperature	40°C	103%
	25°C	100%
	0°C	86%
Self Discharge	GP series battery may be stored for up to 6 months at 25°C (and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

## Applications

- ◆ All purpose
- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Emergency light
- ◆ Railway signal
- ◆ Aircraft signal
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply
- ◆ DC power supply
- ◆ Auto controlsystem

ISO 9001	ISO 14001	OHSAS 18001	TLC
CE	RoHS	CCC	PV Battery

## Constant Current Discharge (Amperes)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	22.9	17.5	14.5	12.6	9.72	7.16	6.03	3.57	2.79	2.27	1.85	1.61	1.30	1.08	0.594
1.80V/cell	30.7	22.4	17.6	14.9	11.5	8.33	6.76	3.90	3.00	2.42	1.99	1.72	1.37	1.12	0.600
1.75V/cell	34.6	24.6	19.2	16.0	11.9	8.64	7.07	4.04	3.06	2.48	2.04	1.77	1.40	1.15	0.606
1.70V/cell	38.1	26.9	20.5	16.8	12.4	8.99	7.29	4.14	3.15	2.54	2.09	1.81	1.42	1.17	0.617
1.65V/cell	42.0	29.0	21.8	17.8	13.1	9.21	7.46	4.20	3.28	2.63	2.15	1.85	1.44	1.19	0.625
1.60V/cell	46.3	31.5	23.3	19.0	13.8	9.60	7.54	4.38	3.38	2.71	2.22	1.89	1.45	1.21	0.629

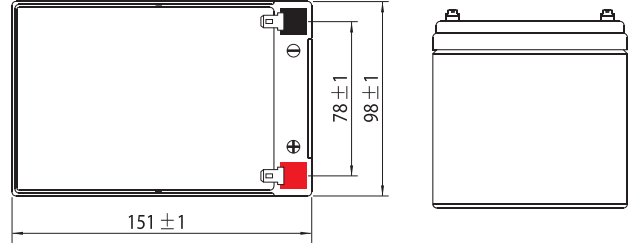
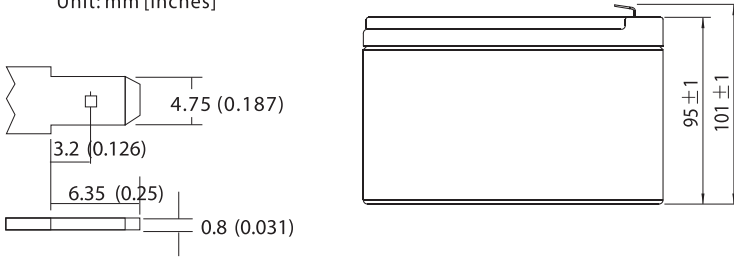
## Constant Power Discharge (Watts) at 25°C

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	41.8	32.4	27.1	23.7	18.5	13.8	11.6	6.93	5.44	4.44	3.63	3.16	2.56	2.14	1.18
1.80V/cell	55.5	40.9	32.3	27.6	21.5	15.9	13.0	7.51	5.82	4.71	3.88	3.37	2.71	2.21	1.19
1.75V/cell	61.2	44.3	34.9	29.4	22.2	16.3	13.5	7.76	5.91	4.80	3.97	3.46	2.75	2.26	1.20
1.70V/cell	65.6	47.1	36.7	30.7	22.9	16.9	13.9	7.94	6.06	4.92	4.06	3.52	2.78	2.31	1.22
1.65V/cell	71.3	50.4	38.7	32.3	24.0	17.2	14.1	8.01	6.29	5.07	4.16	3.59	2.82	2.35	1.23
1.60V/cell	76.8	53.5	40.8	34.1	25.2	17.8	14.2	8.31	6.45	5.21	4.28	3.65	2.84	2.37	1.24

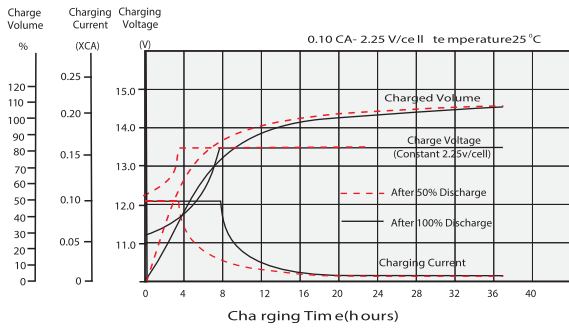
**Note** The above data are average values, and can be obtained with 3 charge/discharge cycles. These are not minimum values.

## Dimensions

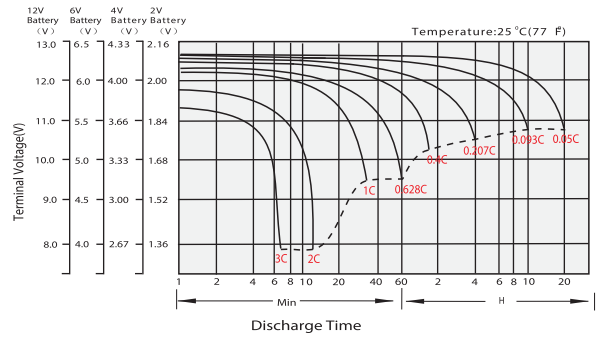
### T1 Terminal Unit: mm [inches]



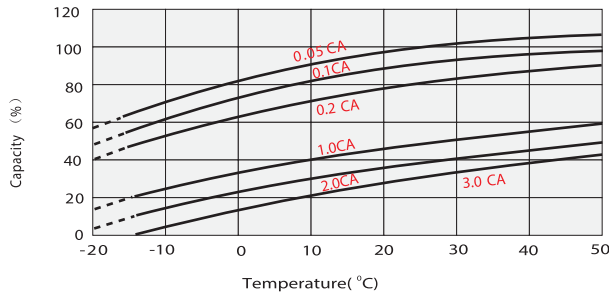
## Float Charging Characteristics



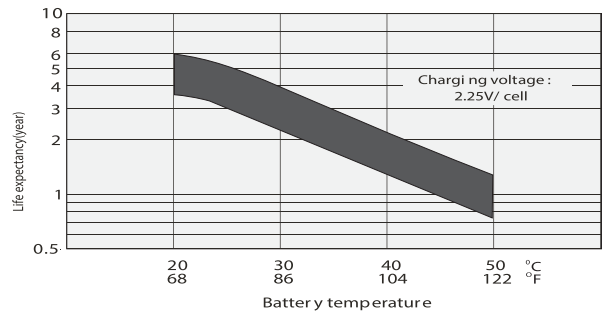
## Discharge Characteristics



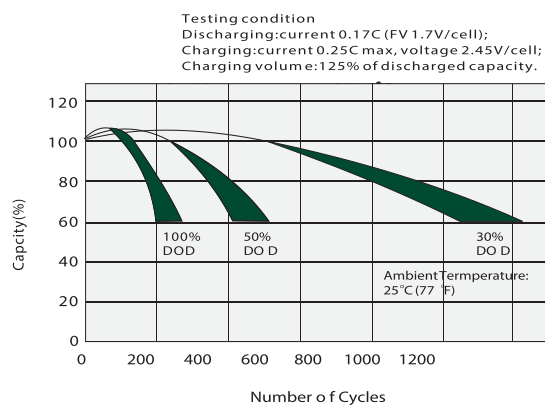
## Temperature Effects in Relation to Battery Capacity



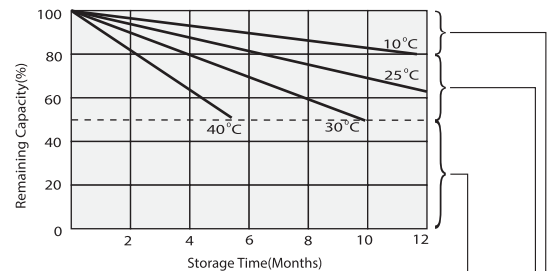
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## Self Discharge Characteristics



Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.

Supplementary charge required before use. Optional charging as below:  
 1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.  
 2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.  
 3. Charged for 8-10 hours at limited current 0.05CA.

No supplementary charge required (Carry out supplementary charge before use if 100% capacity is required.)

## Merlion GP BATTERIES

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