



# A Series - General Purpose A12-5w (12v 6.0Ahr)

## Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	6.0AH	
Dimension	Length	90±1mm (3.54 inches)
	Width	70±1mm (2.76 inches)
	Container Height	101±1mm (3.98 inches)
	Total Height (with Terminal)	107±1mm (4.21 inches)
Approx Weight	Approx 1.8 kg (3.97lbs)	
Terminal	T2	
Container Material	ABS	
Rated Capacity	6.00 AH/0.30A	(20hr, 1.80V/cell, 25°C/77°F)
	5.58 AH/0.558A	(10hr, 1.80V/cell, 25°C/77°F)
	5.10 AH/1.02A	(5hr, 1.75V/cell, 25°C/77°F)
	4.59 AH/1.53A	(3hr, 1.75V/cell, 25°C/77°F)
	3.77 AH/3.77A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	90A (5s)	
Internal Resistance	Approx 25mΩ	
Operating Temp. Range	Discharge	-15~50°C (5~122°F)
	Charge	0~40°C (32~104°F)
	Storage	-15~40°C (5~104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 1.8A. Voltage	
	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	Synergy A series batteries may be stored for up to 6 months at 25°C(77°F) 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 control system



## Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	11.4	8.77	7.27	6.28	4.86	3.58	3.02	1.78	1.40	1.14	0.93	0.80	0.648	0.541	0.297
1.80V/cell	15.3	11.2	8.78	7.43	5.73	4.16	3.38	1.95	1.50	1.21	0.99	0.86	0.687	0.558	0.300
1.75V/cell	17.3	12.3	9.59	7.99	5.95	4.32	3.54	2.02	1.53	1.24	1.02	0.89	0.699	0.573	0.303
1.70V/cell	19.0	13.4	10.2	8.40	6.20	4.49	3.65	2.07	1.57	1.27	1.05	0.90	0.709	0.584	0.308
1.65V/cell	21.0	14.5	10.9	8.92	6.54	4.61	3.73	2.10	1.64	1.32	1.07	0.92	0.720	0.596	0.313
1.60V/cell	23.2	15.7	11.6	9.50	6.90	4.80	3.77	2.19	1.69	1.36	1.11	0.94	0.727	0.603	0.314

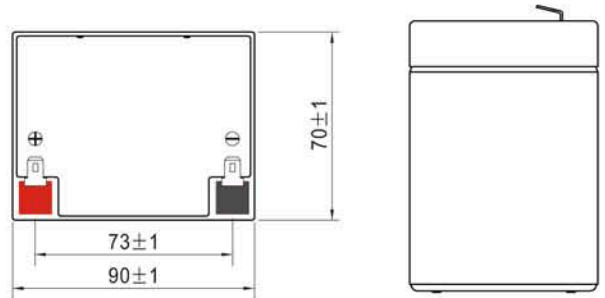
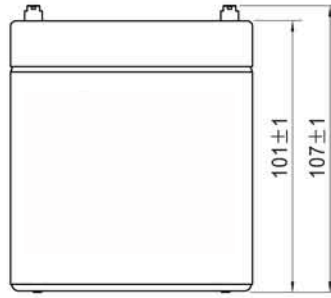
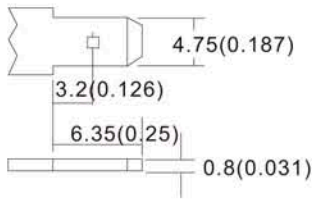
## Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	20.9	16.2	13.6	11.8	9.26	6.88	5.82	3.47	2.72	2.22	1.82	1.58	1.279	1.071	0.588
1.80V/cell	27.7	20.5	16.2	13.8	10.8	7.94	6.48	3.76	2.91	2.36	1.94	1.69	1.353	1.103	0.593
1.75V/cell	30.6	22.1	17.4	14.7	11.1	8.16	6.75	3.88	2.95	2.40	1.98	1.73	1.373	1.131	0.599
1.70V/cell	32.8	23.6	18.4	15.3	11.5	8.46	6.94	3.97	3.03	2.46	2.03	1.76	1.391	1.153	0.609
1.65V/cell	35.6	25.2	19.4	16.2	12.0	8.59	7.05	4.00	3.15	2.54	2.08	1.79	1.409	1.174	0.616
1.60V/cell	38.4	26.7	20.4	17.0	12.6	8.90	7.08	4.16	3.23	2.61	2.14	1.83	1.420	1.185	0.619

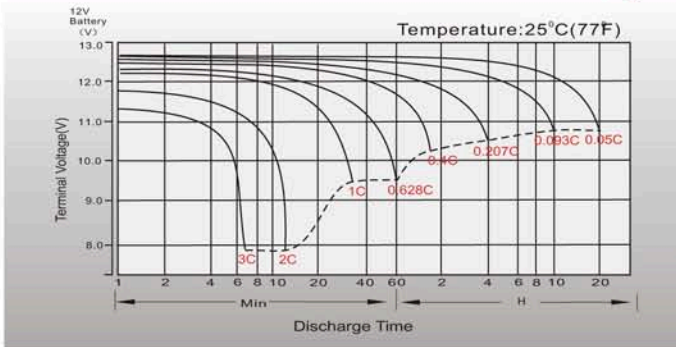
## Dimensions

### T1 Terminal

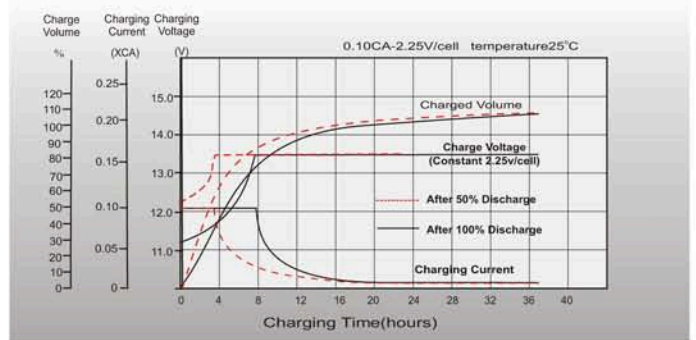
Unit: mm [inches]



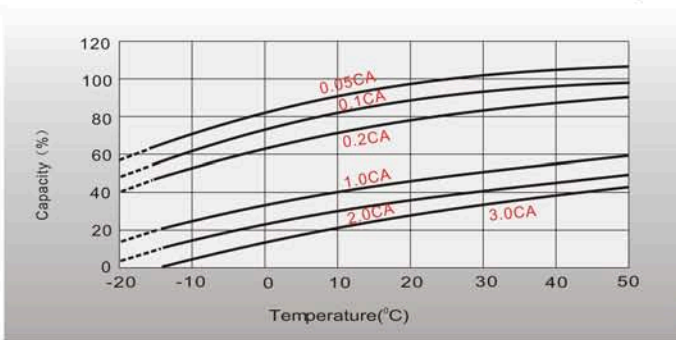
## Discharge Characteristics



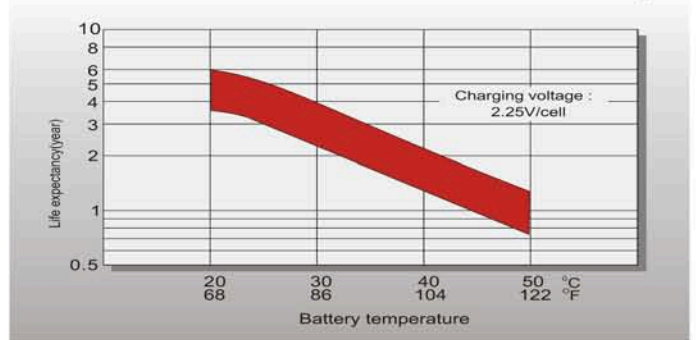
## Float Charging Characteristics



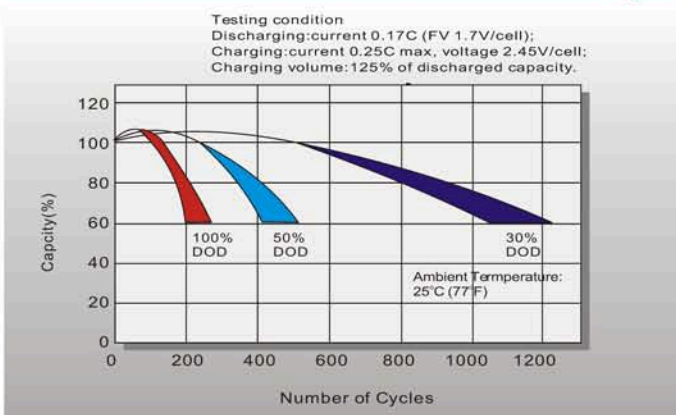
## Temperature Effects in Relation to Battery Capacity



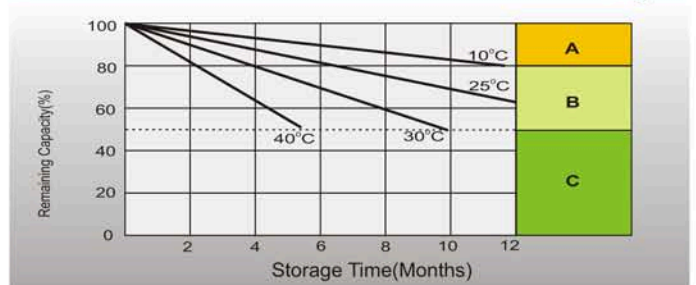
## Effect of Temperature on Long Term Float Life



## Cycle Life in Relation to Depth of Discharge



## Self Discharge Characteristics



- A** No supplementary charge required (Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way 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.
- C** Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this is reached.

## Sales Office

Innovative Energies Ltd  
 1 Heremai St, Auckland, New Zealand  
 Ph: +64 9 8350700  
 Email: info@innovative.co.nz  
 www.innovative.co.nz

