



# A SERIES-General Purpose

## A12-7.5 (12V7.5AH)

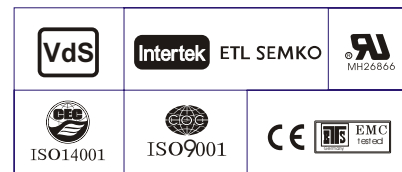
### Specification

Nominal Voltage	12V	
Nominal Capacity(20HR)	7.5AH	
Dimension	Length	151±2mm (5.95 inches)
	Width	65±1mm (2.56 inches)
	Container Height	94.5±1mm (3.72 inches)
	Total Height (with Terminal)	100±1mm (3.94 inches)
Approx Weight	Approx 2.45 kg (5.40lbs)	
Terminal	T1 / T2	
Container Material	ABS	
Rated Capacity	7.50 AH/0.375A	(20hr , 1.80V/cell,25°C/77°F)
	6.98 AH/0.698A	(10hr, 1.80V/cell,25°C/77°F)
	6.37 AH/1.28A	(5hr, 1.75V/cell,25°C/77°F)
	5.74 AH/1.91A	(3hr, 1.75V/cell,25°C/77°F)
	4.71 AH/4.71A	(1hr, 1.60V/cell,25°C/77°F)
Max. Discharge Current	112.5A (5s)	
Internal Resistance	Approx 20mΩ	
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 2.25A. 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	14.3	11.0	9.09	7.86	6.07	4.47	3.77	2.23	1.75	1.42	1.16	1.00	0.810	0.677	0.371
1.80V/cell	19.2	14.0	11.0	9.3	7.17	5.20	4.22	2.43	1.88	1.52	1.24	1.08	0.859	0.698	0.375
1.75V/cell	21.6	15.4	12.0	10.0	7.44	5.40	4.42	2.52	1.91	1.55	1.28	1.11	0.874	0.716	0.379
1.70V/cell	23.8	16.8	12.8	10.5	7.74	5.62	4.56	2.59	1.97	1.59	1.31	1.13	0.886	0.731	0.386
1.65V/cell	26.2	18.1	13.6	11.2	8.17	5.76	4.67	2.63	2.05	1.64	1.34	1.15	0.900	0.746	0.391
1.60V/cell	29.0	19.7	14.6	11.9	8.63	6.00	4.71	2.74	2.11	1.70	1.39	1.18	0.909	0.754	0.393

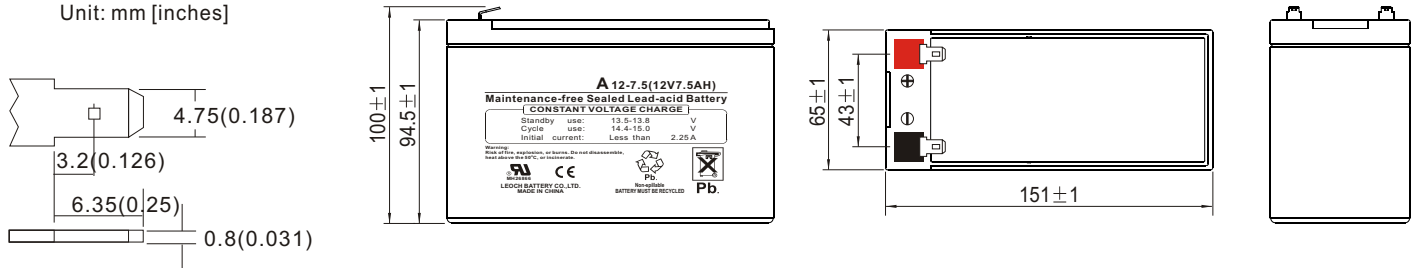
### Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	26.1	20.3	17.0	14.8	11.6	8.60	7.28	4.33	3.40	2.77	2.27	1.97	1.60	1.34	0.735
1.80V/cell	34.7	25.6	20.2	17.2	13.5	9.93	8.11	4.70	3.64	2.95	2.42	2.11	1.69	1.38	0.742
1.75V/cell	38.3	27.7	21.8	18.4	13.8	10.2	8.44	4.85	3.69	3.00	2.48	2.16	1.72	1.41	0.748
1.70V/cell	41.0	29.5	23.0	19.2	14.3	10.6	8.68	4.96	3.79	3.08	2.54	2.20	1.74	1.44	0.761
1.65V/cell	44.5	31.5	24.2	20.2	15.0	10.7	8.82	5.00	3.93	3.17	2.60	2.24	1.76	1.47	0.771
1.60V/cell	48.0	33.4	25.5	21.3	15.7	11.1	8.85	5.19	4.03	3.26	2.68	2.28	1.77	1.48	0.774

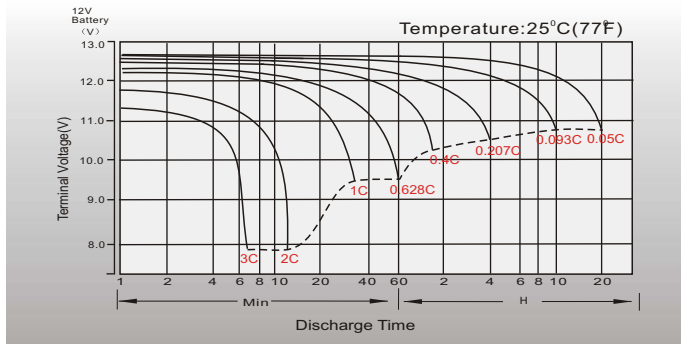
## Dimensions

### T1 Terminal

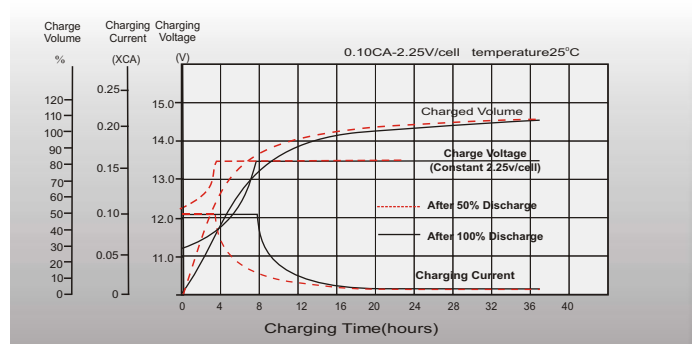
Unit: mm [inches]



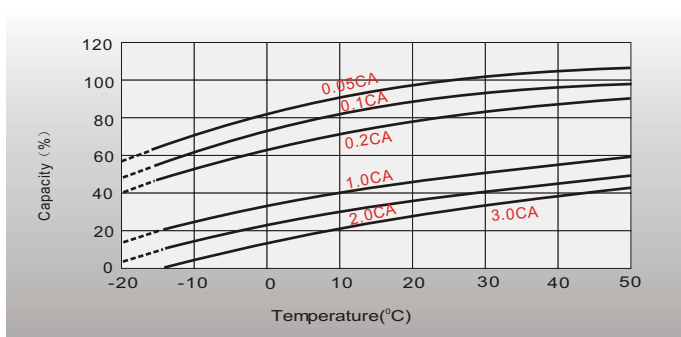
## Discharge Characteristics



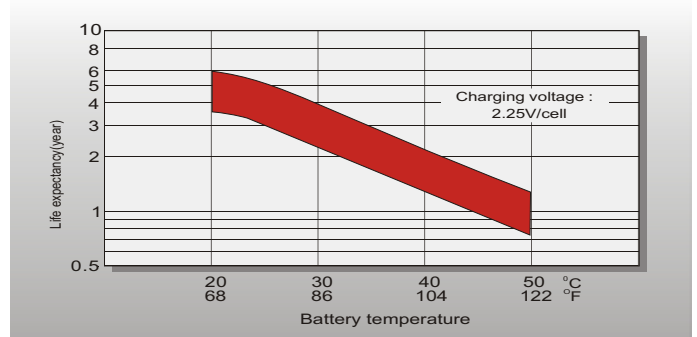
## Float Charging Characteristics



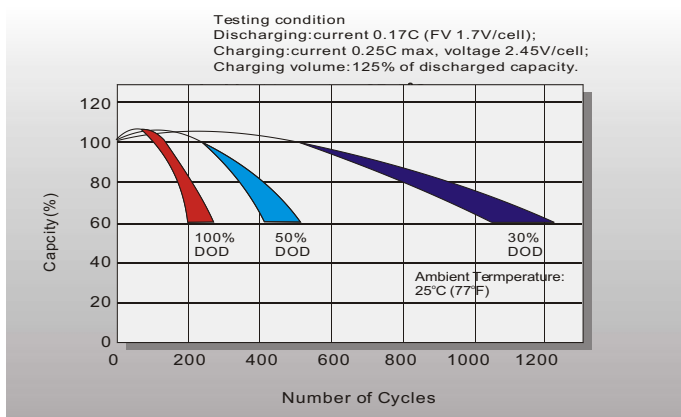
## Temperature Effects in Relation to Battery Capacity



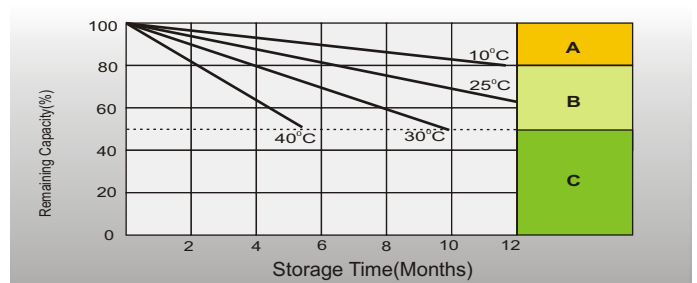
## Effect of Temperature on Long Term Float Life



## 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

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