



Specification	
Nominal Voltage	12V
Nominal Capacity(10HR)	12.0AH
Dimension	Length 151±2mm (5.95 inches)
	Width 98±1mm (3.86 inches)
	Container Height 95±1mm (3.74 inches)
	Total Height (with Terminal) 101±2mm (3.98 inches)
Approx Weight	Approx 3.80 Kg (8.38 lbs)
Terminal	T1
Container Material	ABS
Rated Capacity	12.7AH/0.636A (20hr, 1.80V/cell, 25°C/77°F)
	12.0AH/1.20A (10hr, 1.80V/cell, 25°C/77°F)
	10.4AH/2.08A (5hr, 1.75V/cell, 25°C/77°F)
	9.48AH/3.16A (3hr, 1.75V/cell, 25°C/77°F)
	7.38AH/7.38A (1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	180A (5s)
Internal Resistance	Approx 18.0mΩ
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 3.6A. 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	LL 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

- ◆ UPS and EPS
- ◆ Emergency light
- ◆ Railway signal and aircraft signal system
- ◆ Marine and powerstations
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply, DC power supply

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

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	15.5	12.9	11.0	8.99	6.80	5.70	3.64	2.884	2.34	1.89	1.66	1.33	1.13	0.630
1.80V/cell	19.8	15.6	13.0	10.6	7.91	6.39	3.97	3.103	2.49	2.03	1.78	1.41	1.20	0.636
1.75V/cell	21.7	17.0	14.0	11.0	8.21	6.68	4.12	3.160	2.56	2.08	1.83	1.43	1.21	0.642
1.70V/cell	23.7	18.2	14.7	11.5	8.54	6.90	4.28	3.248	2.62	2.13	1.86	1.45	1.22	0.654
1.65V/cell	25.6	19.4	15.6	12.1	8.75	7.13	4.40	3.386	2.71	2.19	1.91	1.47	1.25	0.662
1.60V/cell	27.8	20.7	16.7	12.8	9.12	7.38	4.55	3.490	2.79	2.27	1.95	1.49	1.26	0.666

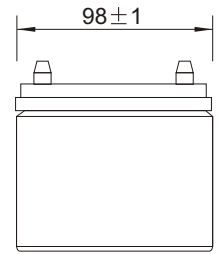
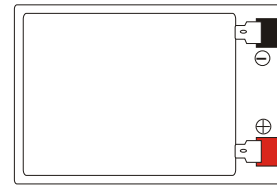
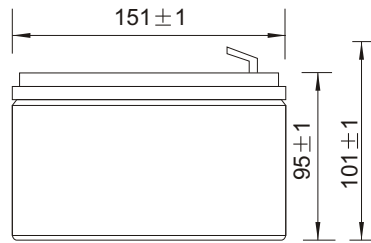
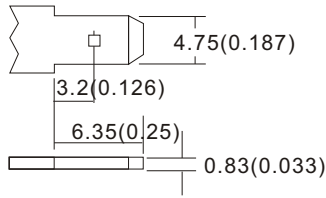
Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	29.1	24.6	21.1	17.5	13.3	11.2	7.20	5.72	4.65	3.77	3.32	2.66	2.28	1.270
1.80V/cell	36.8	29.3	24.6	20.3	15.4	12.5	7.80	6.12	4.94	4.03	3.54	2.82	2.41	1.280
1.75V/cell	39.8	31.6	26.2	20.9	15.8	13.0	8.06	6.21	5.04	4.12	3.63	2.86	2.43	1.291
1.70V/cell	42.4	33.3	27.4	21.6	16.4	13.4	8.36	6.37	5.16	4.22	3.70	2.90	2.46	1.314
1.65V/cell	45.4	35.1	28.9	22.6	16.6	13.7	8.55	6.62	5.31	4.32	3.77	2.94	2.50	1.329
1.60V/cell	48.1	36.9	30.4	23.7	17.2	14.1	8.79	6.79	5.46	4.45	3.84	2.96	2.53	1.335

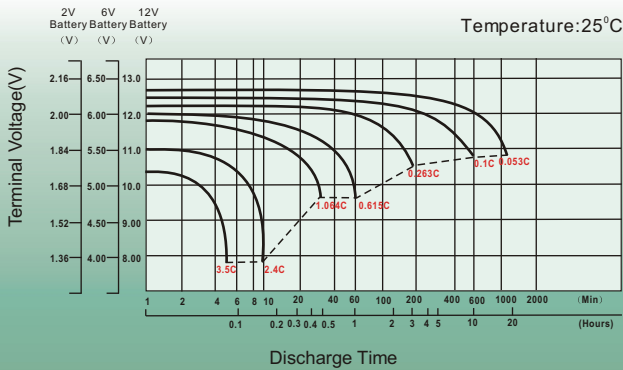
Dimensions

T1 Terminal

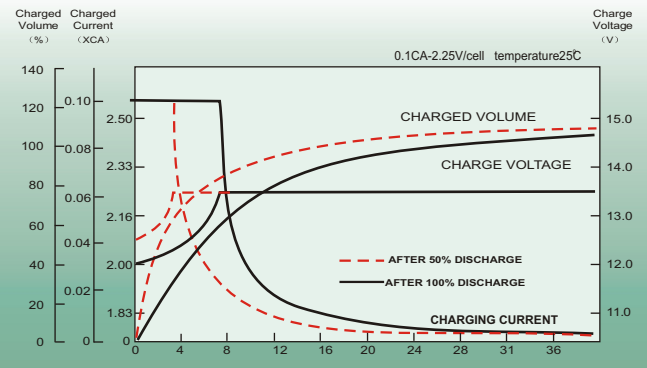
Unit: mm [inches]



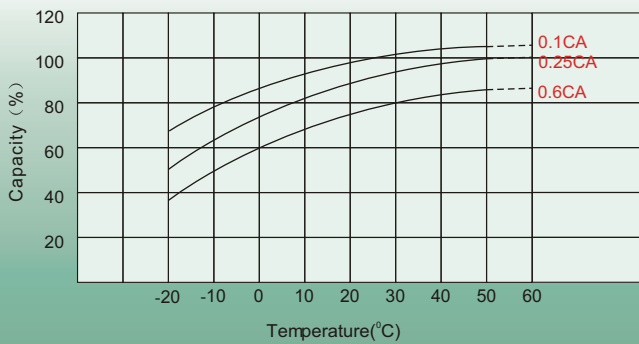
Discharge Characteristics



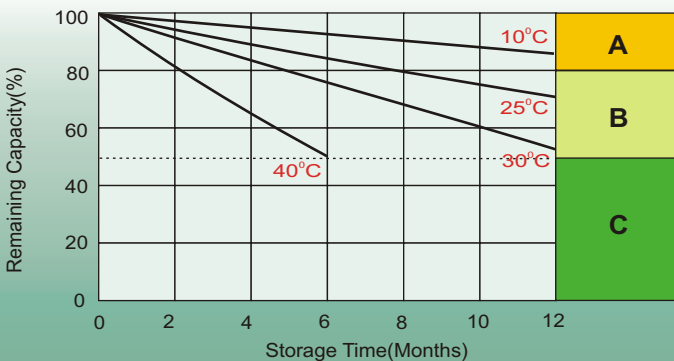
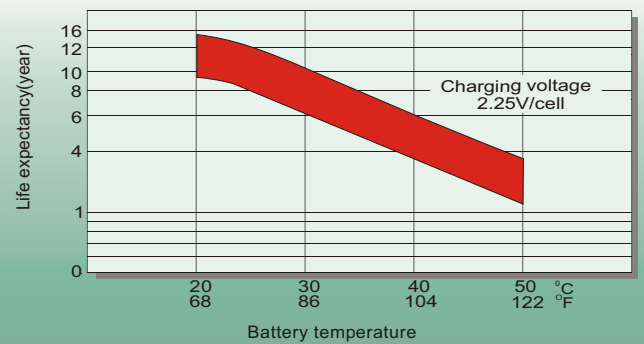
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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 volatge 2.25V/cell.
 2. Charged for above 20hours at limited current 0.25CA and constant volatge 2.45V/cell.
 3. Charged for 8-10hours 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.