

# LL SERIES-Long Life

## LL12065(12V65AH)



### Specification

Nominal Voltage	12V	
Nominal Capacity( 10HR)	65.0AH	
Dimension	Length	348±3mm (13.7 inches)
	Width	167±2mm (6.57 inches)
	Container Height	178±3mm (7.01 inches)
	Total Height (with Terminal)	178±3mm (7.01 inches)
Approx Weight	Approx 21.2 Kg (46.7 lbs)	
Terminal	T6	
Container Material	ABS	
Rated Capacity	68.2AH/3.41A	(20hr , 1.80V/cell, 25°C/77°F)
	65.0AH/6.50A	(10hr, 1.80V/cell, 25°C/77°F)
	59.0AH/11.8A	(5hr, 1.75V/cell, 25°C/77°F)
	54.0AH/18.0A	(3hr, 1.75V/cell, 25°C/77°F)
	41.4AH/41.4A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	780A (5s)	
Internal Resistance	Approx 7.0mΩ	
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 19.5A. 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) emp. 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 20°C(68°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 power stations 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	96.2	83.4	65.6	58.6	42.9	36.3	22.1	16.2	12.7	11.1	9.74	7.49	6.21	3.29
1.80V/cell	109.2	94.5	74.1	63.8	45.4	37.6	22.8	17.6	13.6	11.6	10.5	7.88	6.50	3.41
1.75V/cell	118.4	102.3	80.0	65.1	47.1	39.5	24.1	18.0	13.8	11.8	10.5	7.92	6.57	3.45
1.70V/cell	126.2	108.6	84.9	66.4	48.0	40.3	24.5	18.3	14.1	12.0	10.6	8.04	6.63	3.48
1.65V/cell	130.2	111.8	87.2	67.4	48.7	40.8	24.9	18.5	14.3	12.3	10.7	8.16	6.71	3.53
1.60V/cell	134.7	115.3	89.4	68.4	49.4	41.4	25.3	18.7	14.5	12.4	10.7	8.26	6.79	3.57

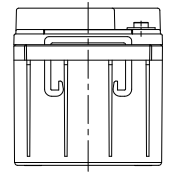
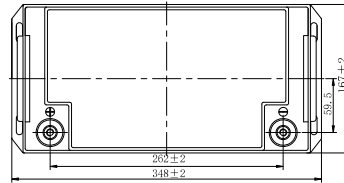
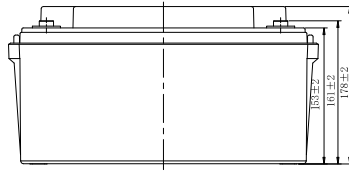
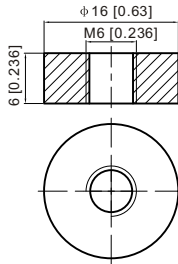
### Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	180.9	157.9	124.7	112.0	82.4	70.2	43.0	31.7	25.0	21.8	19.3	14.9	12.3	6.56
1.80V/cell	202.4	176.6	139.5	121.0	86.8	72.3	44.2	34.3	26.6	22.8	20.6	15.6	12.9	6.78
1.75V/cell	216.0	188.5	148.9	122.5	89.4	75.6	46.4	34.8	27.0	23.1	20.7	15.6	13.0	6.84
1.70V/cell	227.1	198.1	156.5	123.9	90.5	76.7	47.1	35.4	27.3	23.4	20.8	15.9	13.1	6.91
1.65V/cell	230.7	201.4	159.1	124.8	91.3	77.4	47.6	35.6	27.7	23.8	20.8	16.0	13.3	6.99
1.60V/cell	234.0	204.2	161.3	125.4	91.8	78.0	48.0	35.7	27.9	24.1	20.9	16.2	13.4	7.06

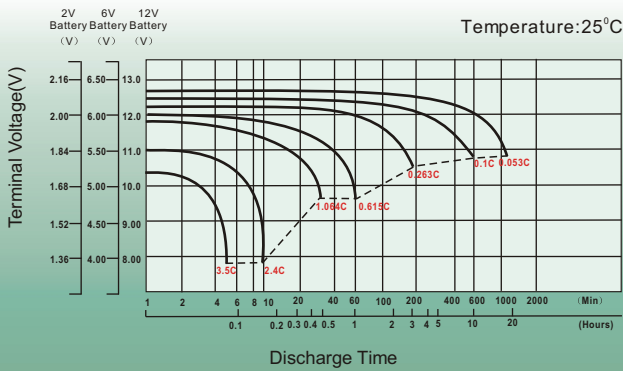
## Dimensions

### T6 Terminal

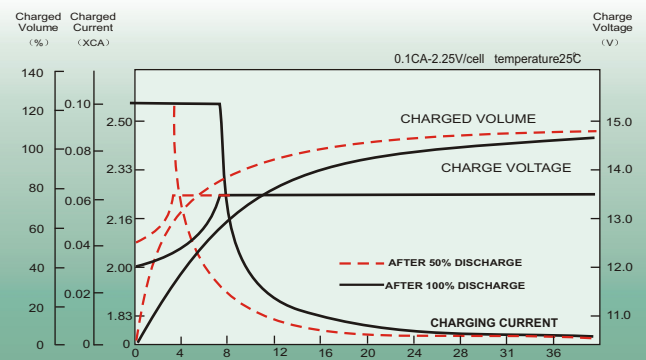
Unit: mm [inches]



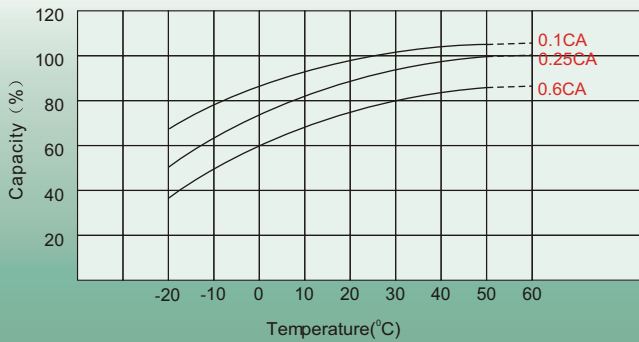
## Discharge Characteristics



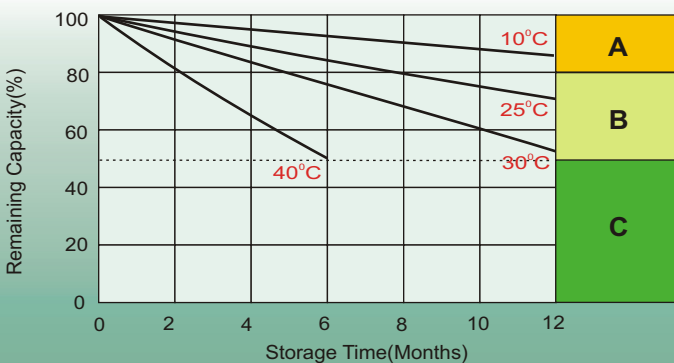
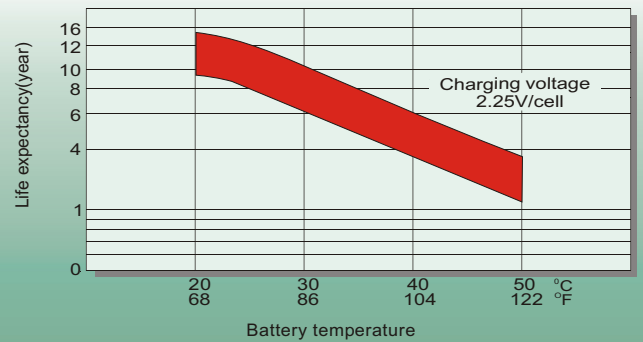
## Float Charging Characteristics



## 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.