

# LPC SERIES - Deep Cycle

## LPC12-50 (12V50AH)

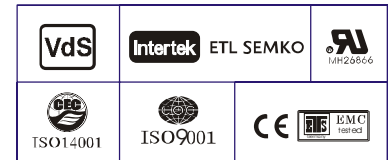
### Specification

Nominal Voltage	12V	
Nominal Capacity(10HR)	50.0AH	
Dimension	Length	257±3mm (10.11 inches)
	Width	132±2mm (5.19 inches)
	Container Height	200±2mm (7.87 inches)
	Total Height (with Terminal)	200±2mm (7.87 inches)
Approx Weight	Approx 17.6 Kg (38.8 lbs)	
Terminal	T6	
Container Material	ABS	
Rated Capacity	53.6 AH/2.68A	(20hr, 1.80V/cell, 25°C/77°F)
	50.0 AH/5.50A	(10hr, 1.80V/cell, 25°C/77°F)
	43.9 AH/8.77A	(5hr, 1.75V/cell, 25°C/77°F)
	39.8 AH/13.3A	(3hr, 1.75V/cell, 25°C/77°F)
	32.3 AH/32.3A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	600A (5s)	
Internal Resistance	Approx 8.0mΩ	
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 15.0A. 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	Leoch LPC 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

- ◆ Electric tools
- ◆ Vehicle in place of walking
- ◆ Lawn mowers
- ◆ Golf trolleys and golf cart
- ◆ Portable apparatus, lights and instruments;
- ◆ Electric toys
- ◆ Illumination light
- ◆ Fire alarms
- ◆ Portable power
- ◆ Wheelchairs
- ◆ Medical equipments.



### 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	73.2	61.6	53.8	38.7	30.8	25.0	15.5	12.1	9.80	7.96	6.95	5.67	4.72	2.66
1.80V/cell	93.5	74.4	63.6	45.7	35.8	28.0	16.9	13.0	10.5	8.55	7.45	6.01	5.00	2.68
1.75V/cell	102.8	81.3	68.4	47.4	37.1	29.3	17.6	13.3	10.7	8.77	7.65	6.11	5.05	2.71
1.70V/cell	112.0	86.8	71.9	49.4	38.6	30.2	18.3	13.6	11.0	8.99	7.81	6.20	5.10	2.76
1.65V/cell	120.9	92.3	76.4	52.1	39.6	31.2	18.8	14.2	11.4	9.2	7.98	6.30	5.21	2.79
1.60V/cell	131.3	98.7	81.4	55.0	41.3	32.3	19.4	14.6	11.7	9.5	8.16	6.36	5.26	2.81

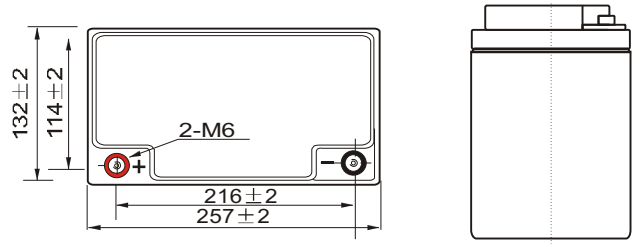
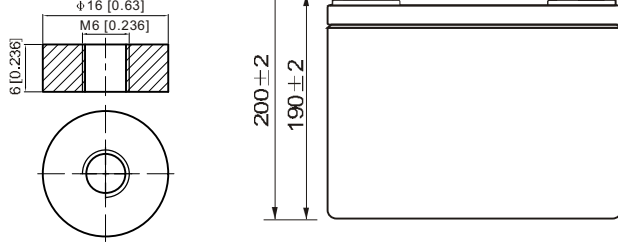
### Constant Power Discharge (Watts/cell) at 25 °C (77 °F)

F.V/Time	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	136.6	116.1	102.6	74.4	59.5	48.5	30.2	23.6	19.2	15.6	13.7	11.2	9.3	5.31
1.80V/cell	172.2	138.2	119.4	86.8	68.6	54.0	32.8	25.3	20.4	16.7	14.7	11.9	9.9	5.35
1.75V/cell	186.9	149.5	127.4	89.6	70.9	56.2	33.9	25.7	20.8	17.1	15.0	12.1	10.0	5.40
1.70V/cell	200.8	158.5	133.1	92.9	73.5	57.9	35.2	26.3	21.3	17.5	15.3	12.2	10.1	5.49
1.65V/cell	215.2	167.4	140.8	97.6	75.1	59.6	36.0	27.4	22.0	18.0	15.6	12.4	10.3	5.56
1.60V/cell	229.7	176.9	148.4	102.0	77.5	61.2	37.0	28.1	22.6	18.5	15.9	12.5	10.4	5.58

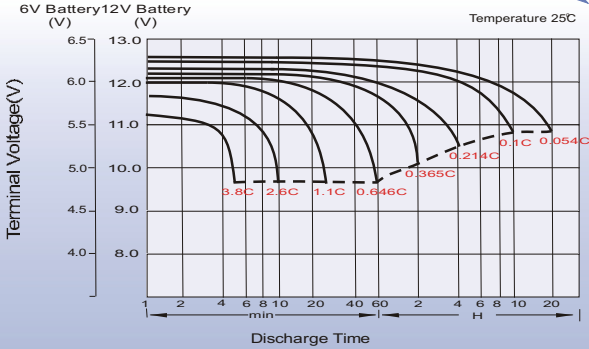
## Dimensions

### T6 Terminal

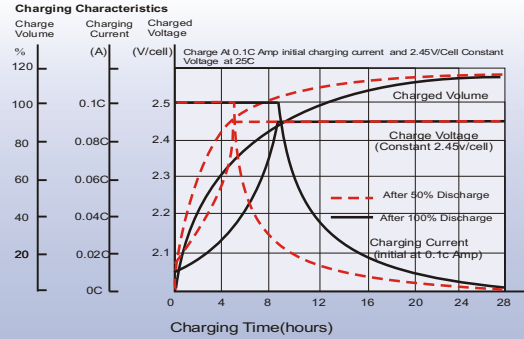
Unit: mm [inches]



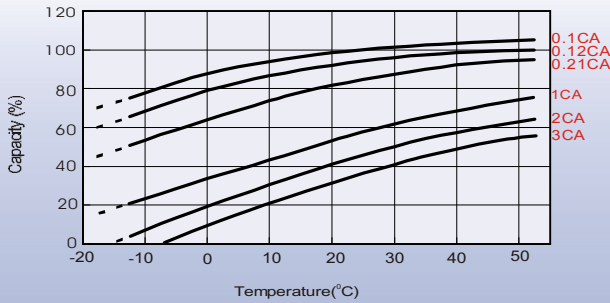
## Discharge Characteristics



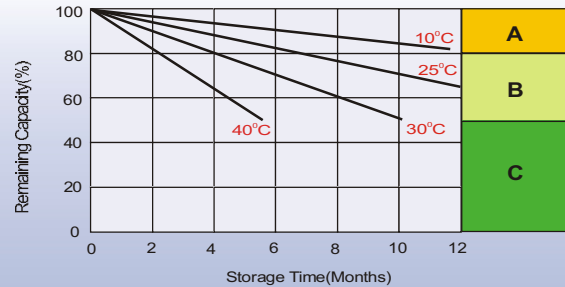
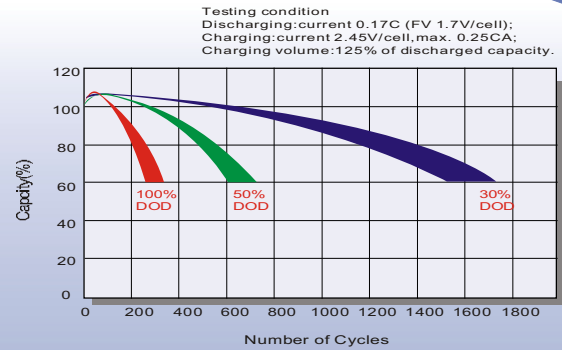
## Charging Characteristics (cycle use)



## Temperature Effects in Relation to Battery Capacity



## 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.

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