

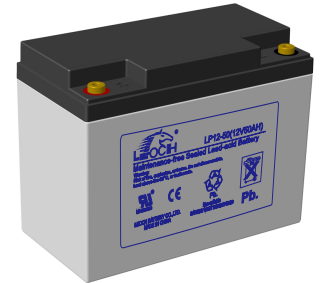


# LP Series-General Purpose LP12-50(12V50Ah)

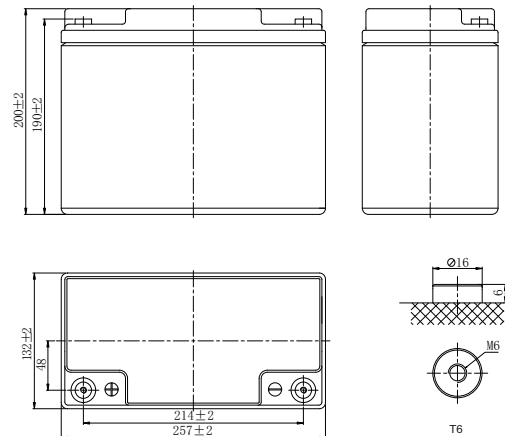


## Specifications

Rated Voltage	12V	
Nominal Capacity	50.0Ah	(C <sub>10</sub> , 1.80V/cell)
Dimension	Length	257±2mm (10.1 inches)
	Width	132±2mm (5.19 inches)
	Container Height	200±2mm (7.87 inches)
	Total Height	200±2mm (7.87 inches)
Approx Weight	15.7 Kg (34.6 lbs)	
Terminal	T6(M6)	
Container Material	ABS	
Rated Capacity (25°C)	52.6 Ah	(20hr, 2.63A, 1.80V/cell)
	50.0 Ah	(10hr, 5.00A, 1.80V/cell)
	45.5 Ah	(5hr, 9.10A, 1.75V/cell)
	41.4 Ah	(3hr, 13.8A, 1.75V/cell)
	31.9 Ah	(1hr, 31.9A, 1.60V/cell)
Max. Discharge Current	500A (5s)	
Internal Resistance (25°C)	Approx 9.0mΩ	
Operating Temp. Range	Discharge	-15 ~ 50°C (5 ~ 122°F)
	Charge	-20 ~ 40°C (-4 ~ 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	
	Initial Charging Current less than 15.0A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Standby Use	Initial Charging Current less than 15.0A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	LP 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.	



## Layout



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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	102.0	72.5	64.1	50.4	45.1	33.0	27.9	20.2	17.0	12.5	9.79	8.50	7.49	5.76	4.78	2.53
1.80V/cell	115.9	82.3	72.7	57.0	49.1	34.9	28.9	20.9	17.6	13.6	10.5	8.94	8.05	6.06	5.00	2.63
1.75V/cell	125.9	89.2	78.7	61.6	50.1	36.2	30.4	22.0	18.5	13.8	10.7	9.10	8.11	6.09	5.05	2.65
1.70V/cell	134.6	95.1	83.6	65.3	51.1	36.9	31.0	22.4	18.9	14.1	10.8	9.25	8.15	6.19	5.10	2.68
1.67V/cell	139.3	98.2	86.0	67.1	51.9	37.5	31.4	22.8	19.1	14.2	11.0	9.44	8.19	6.28	5.17	2.71
1.60V/cell	144.3	101.5	88.7	68.8	52.6	38.0	31.9	23.1	19.4	14.3	11.1	9.57	8.25	6.36	5.23	2.74

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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	184.6	132.2	119.0	94.0	84.4	62.1	52.9	38.5	32.4	23.9	18.8	16.4	14.5	11.2	9.31	4.94
1.80V/cell	206.5	147.9	133.1	105.2	91.2	65.4	54.5	39.6	33.3	25.8	20.0	17.2	15.5	11.8	9.73	5.11
1.75V/cell	220.4	157.8	142.1	112.2	92.4	67.4	57.0	41.4	35.0	26.3	20.3	17.4	15.6	11.8	9.82	5.16
1.70V/cell	231.7	165.9	149.4	118.0	93.4	68.2	57.8	42.1	35.5	26.7	20.6	17.7	15.7	12.0	9.91	5.21
1.67V/cell	235.4	168.6	151.8	119.9	94.1	68.8	58.3	42.5	35.9	26.8	20.9	18.0	15.7	12.1	10.0	5.27
1.60V/cell	238.7	171.0	153.9	121.6	94.5	69.2	58.8	42.8	36.2	26.9	21.0	18.1	15.7	12.2	10.1	5.32



# LP Series-General Purpose LP12-50(12V50Ah)



## Applications

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Auto control system

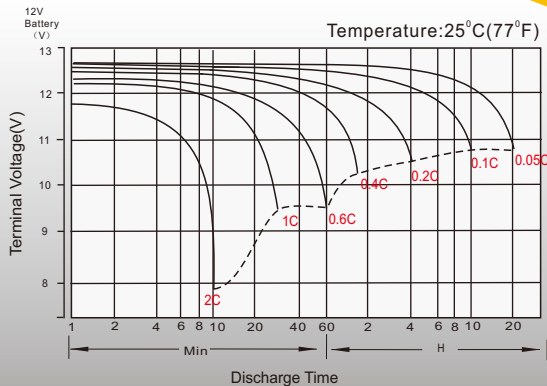
## General Features

- 10 years design life(25°C)
- Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- High quality AGM separator: extend cycle life and prevent micro short circuit
- High purity raw material: ensure low self discharge rate

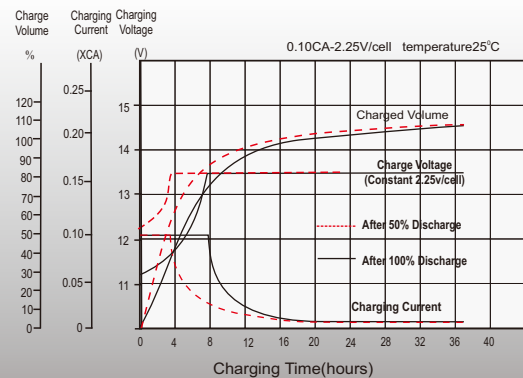
## Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in Leoch®IATF 16949, ISO45001, ISO 9001 and ISO 14001 certified production facilities

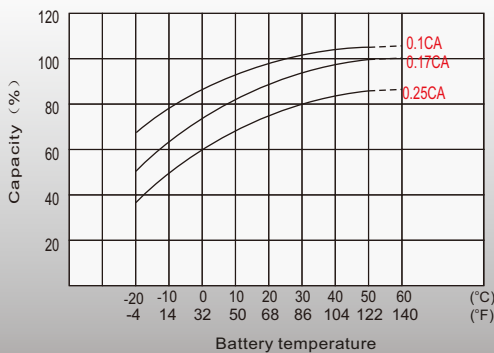
## Discharge Characteristics



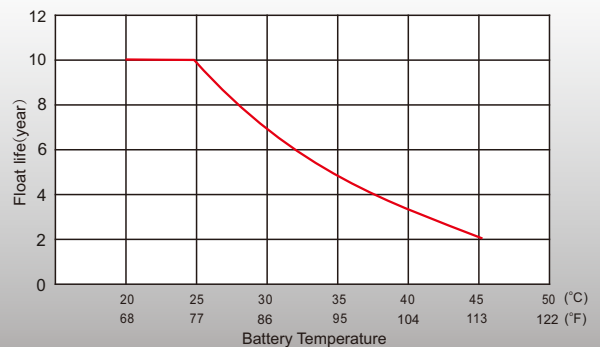
## Float Charging Characteristics



## Temperature Effects in Relation to Battery Capacity



## Effect of Temperature on Long Term Float Life



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