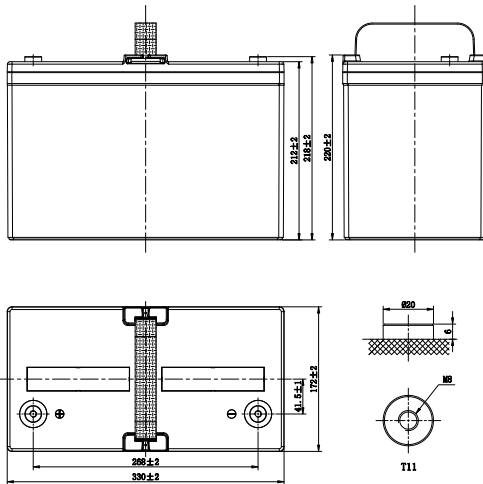


# LP SERIES-GENERAL PURPOSE

## LP12-90 (12V90Ah)



### CHARACTERISTICS

Item	Specifications	
Rated Voltage	12V	
Nominal Capacity (25°C)	C <sub>10</sub> : 1.80V/cell	90Ah
Dimension	Length	330mm(13.0inches)
	Width	172mm(6.77inches)
	Container Height	212mm(8.35inches)
	Total Height	220mm(8.66inches)
Approx Weight	27.6kg(60.8lbs)	
Terminal	T11(M8)	
Container Material	ABS (UL94 HB or V-0 optional)	
Short-circuit current	2070A	
Internal Resistance (25°C)	Approx 5.5 mΩ (Fully charged)	
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)	
Max.Charging Current (25°C)	0.3C	
Charge voltage (25°C)	Standby Use	Cycle Use
	2.25-2.30V/cell	2.35-2.40V/cell
Temp. Coefficient	-3mV/cell/°C	
	-5mV/cell/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	≤3% per month at 25°C (77°F). LP series batteries may be stored 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.	

### DISCHARGE TABLE

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	180.4	134.9	112.0	94.7	73.3	55.8	48.2	36.4	29.3	22.1	17.6	14.8	12.9	10.2	8.49	4.68
1.80V/cell	210.3	159.1	130.3	109.2	82.9	62.4	53.3	39.9	31.9	23.9	19.0	15.9	13.8	10.9	9.00	4.94
1.75V/cell	229.5	170.5	137.8	114.6	86.7	65.0	55.3	41.2	32.9	24.5	19.5	16.3	14.1	11.1	9.20	5.00
1.70V/cell	248.5	181.9	145.6	120.6	90.5	67.4	57.3	42.6	33.9	25.2	20.0	16.7	14.4	11.3	9.34	5.06
1.67V/cell	259.5	188.5	150.2	124.0	92.8	68.9	58.5	43.4	34.5	25.6	20.3	16.9	14.6	11.4	9.43	5.10
1.60V/cell	286.0	204.0	161.0	132.0	98.0	72.5	61.3	45.3	35.9	26.5	20.9	17.4	15.0	11.7	9.63	5.19
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	342.7	258.2	215.2	182.6	141.7	108.2	93.6	71.0	57.3	43.2	34.7	29.1	25.4	20.1	16.8	9.30
1.80V/cell	393.5	300.8	247.6	208.3	158.9	120.2	102.9	77.3	62.0	46.6	37.3	31.3	27.2	21.5	17.9	9.81
1.75V/cell	422.8	318.6	259.2	216.5	164.7	124.1	106.0	79.4	63.5	47.6	38.0	31.9	27.7	21.8	18.1	9.93
1.70V/cell	450.5	335.3	270.9	225.5	170.4	127.8	109.1	81.6	65.2	48.8	38.9	32.5	28.2	22.2	18.4	10.0
1.67V/cell	465.8	344.9	280.1	230.5	173.7	130.0	110.8	82.8	66.1	49.4	39.3	32.9	28.5	22.4	18.5	10.1
1.60V/cell	500.5	365.6	292.3	241.6	181.2	135.3	115.1	85.7	68.3	50.9	40.4	33.7	29.1	22.8	18.9	10.3

# LP SERIES-GENERAL PURPOSE

## LP12-90 (12V90Ah)

### 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

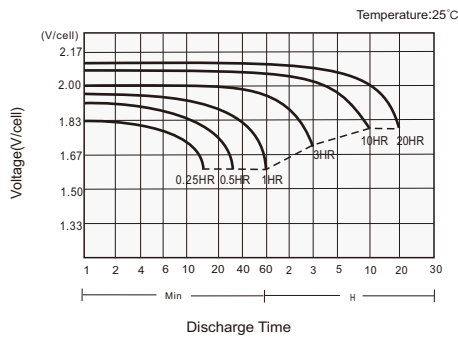
### GENERAL FEATURES

- 10 years design life (25°C)
- Lead calcium alloy, sealed design, no watering required
- Puncture resistant micro-porous glass mat separators extend life
- Unique technology optimizes power capacity, cell consistency, and long-term reliability
- Designed for a wide range of applications

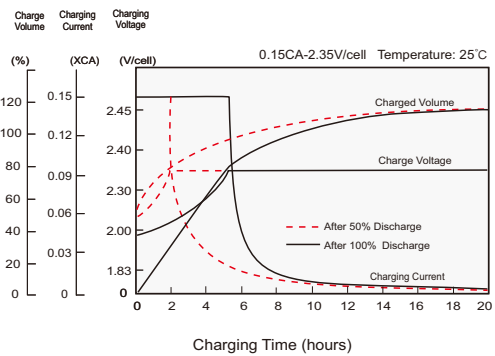
### STANDARDS

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Approved
- Manufactured in Leoch@IATF 16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

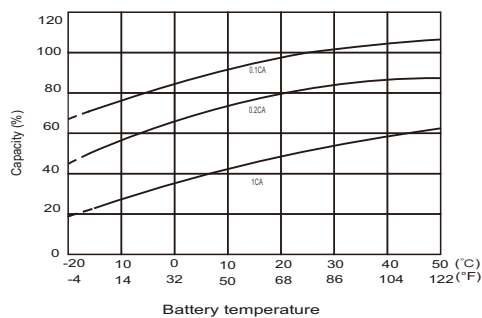
#### Discharge Characteristics



#### Charging Characteristics



#### Effects of Temperature on Capacity



#### Self Discharge Characteristics

