



LP Series-General Purpose LP12-4.5(12V4.5Ah)

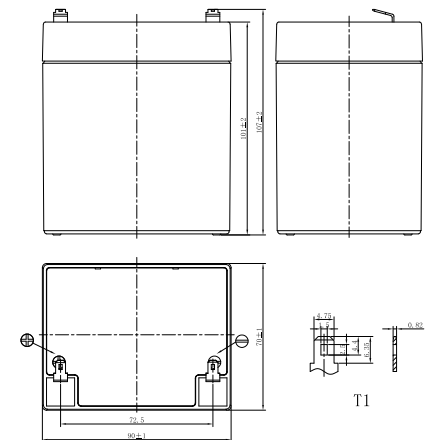


Specifications

Rated Voltage	12V	
Nominal Capacity	4.5Ah	(C ₂₀ , 1.75V/cell)
Dimension	Length	90±1mm (3.54 inches)
	Width	70±1mm (2.76 inches)
	Container Height	101±2mm (3.98 inches)
	Total Height	107±2mm (4.21 inches)
Approx Weight	1.39 Kg (3.06 lbs)	
Terminal	T1/T2	
Container Material	ABS	
Rated Capacity (25°C)	4.50 Ah	(20hr, 0.225A, 1.75V/cell)
	4.19 Ah	(10hr, 0.419A, 1.75V/cell)
	3.83 Ah	(5hr, 0.765A, 1.75V/cell)
	3.39 Ah	(3hr, 1.13A, 1.75V/cell)
	2.66 Ah	(1hr, 2.66A, 1.60V/cell)
Max. Discharge Current	75A (5s)	
Internal Resistance (25°C)	Approx 48mΩ	
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 1.35A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
	Standby Use	
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	11.3	8.26	6.55	5.35	4.07	2.99	2.44	1.84	1.53	1.09	0.876	0.744	0.637	0.500	0.409	0.220
1.80V/cell	12.2	8.69	6.81	5.51	4.17	3.04	2.48	1.87	1.56	1.11	0.888	0.755	0.645	0.507	0.413	0.222
1.75V/cell	13.1	9.10	7.06	5.68	4.27	3.11	2.53	1.90	1.58	1.13	0.900	0.765	0.653	0.513	0.419	0.225
1.70V/cell	14.1	9.50	7.31	5.84	4.37	3.16	2.57	1.94	1.61	1.14	0.910	0.775	0.662	0.519	0.424	0.227
1.67V/cell	14.8	9.80	7.46	5.95	4.43	3.20	2.60	1.95	1.62	1.15	0.920	0.780	0.667	0.523	0.427	0.229
1.60V/cell	16.0	10.40	7.80	6.17	4.56	3.29	2.66	2.00	1.66	1.17	0.940	0.795	0.679	0.532	0.433	0.231

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	21.3	15.8	12.6	10.3	7.86	5.79	4.74	3.59	3.01	2.15	1.73	1.47	1.26	0.990	0.812	0.489
1.80V/cell	23.0	16.5	13.1	10.5	8.02	5.89	4.82	3.65	3.04	2.18	1.75	1.49	1.28	1.01	0.821	0.494
1.75V/cell	24.7	17.2	13.4	10.8	8.18	5.98	4.89	3.69	3.09	2.21	1.76	1.50	1.29	1.02	0.831	0.499
1.70V/cell	26.4	17.9	13.9	11.1	8.33	6.07	4.96	3.74	3.12	2.23	1.79	1.52	1.31	1.03	0.840	0.504
1.67V/cell	27.4	18.4	14.0	11.3	8.42	6.13	5.00	3.77	3.15	2.25	1.80	1.53	1.31	1.04	0.845	0.507
1.60V/cell	29.5	19.3	14.6	11.6	8.63	6.26	5.09	3.83	3.20	2.29	1.83	1.56	1.33	1.05	0.858	0.515



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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

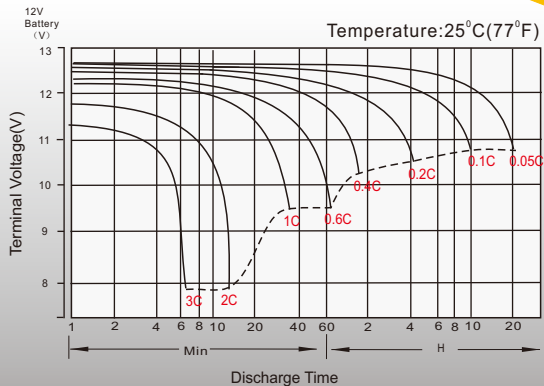
General Features

- 5 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

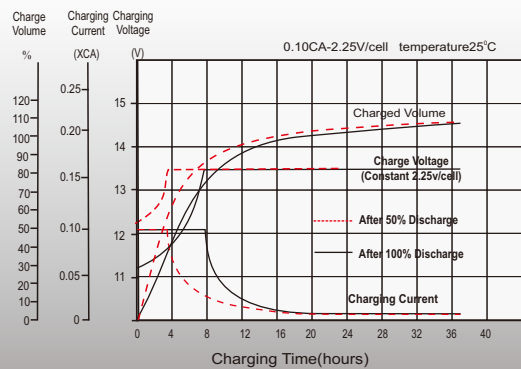
Standards

- 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

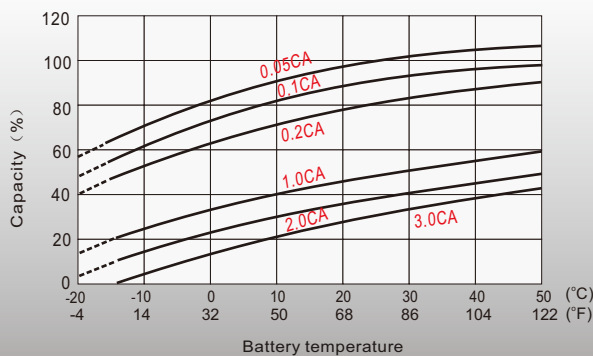
Discharge Characteristics



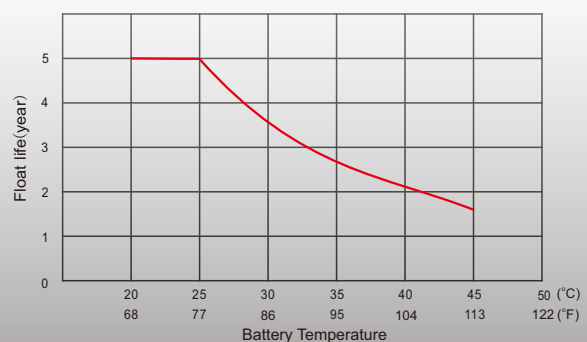
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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