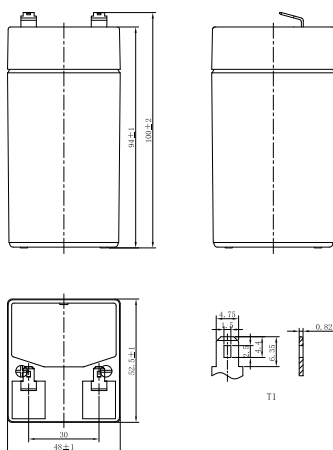


LP SERIES-GENERAL PURPOSE

LP4-4.5 (4V4.5Ah)



CHARACTERISTICS

Item	Specifications	
Rated Voltage	4V	
Nominal Capacity (25°C)	$C_{20}, 1.75V/cell$	4.5Ah
Dimension	Length	52.5mm (2.07inches)
	Width	48mm (1.89inches)
	Container Height	94mm (3.70inches)
	Total Height	100mm (3.94inches)
Approx Weight	0.60kg (1.32lbs)	
Terminal	T1/T2	
Container Material	ABS (UL94 HB or V-0 optional)	
Short-circuit current	126A	
Internal Resistance (25°C)	Approx 15 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	2.35-2.45V/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	12.8	8.74	6.97	5.67	4.19	3.08	2.53	1.87	1.49	1.09	0.876	0.747	0.646	0.509	0.416	0.220
1.80V/cell	13.7	9.27	7.31	5.89	4.32	3.16	2.60	1.91	1.51	1.11	0.889	0.758	0.656	0.516	0.421	0.223
1.75V/cell	14.4	9.64	7.55	6.06	4.43	3.23	2.65	1.95	1.54	1.12	0.901	0.768	0.663	0.522	0.426	0.225
1.70V/cell	15.1	10.0	7.81	6.23	4.55	3.30	2.70	1.98	1.56	1.14	0.913	0.778	0.671	0.527	0.430	0.227
1.67V/cell	15.7	10.3	8.00	6.36	4.63	3.36	2.74	2.01	1.58	1.15	0.922	0.785	0.677	0.531	0.433	0.229
1.60V/cell	16.6	10.7	8.27	6.55	4.75	3.44	2.80	2.05	1.61	1.17	0.938	0.797	0.687	0.539	0.439	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	24.1	16.6	13.3	10.9	8.10	5.97	4.93	3.66	2.91	2.14	1.73	1.48	1.28	1.01	0.826	0.440
1.80V/cell	25.7	17.5	13.9	11.3	8.32	6.11	5.03	3.72	2.96	2.17	1.75	1.49	1.30	1.02	0.837	0.445
1.75V/cell	26.8	18.1	14.3	11.5	8.49	6.22	5.12	3.78	3.00	2.20	1.77	1.51	1.31	1.03	0.844	0.450
1.70V/cell	27.8	18.7	14.7	11.8	8.67	6.34	5.19	3.83	3.04	2.23	1.79	1.53	1.32	1.04	0.853	0.454
1.67V/cell	28.5	19.1	15.0	12.0	8.80	6.42	5.26	3.88	3.07	2.25	1.80	1.54	1.33	1.05	0.858	0.457
1.60V/cell	29.6	19.7	15.4	12.3	9.00	6.54	5.36	3.94	3.12	2.28	1.83	1.56	1.35	1.06	0.868	0.462

LP SERIES-GENERAL PURPOSE

LP4-4.5 (4V4.5Ah)



APPLICATIONS

- 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

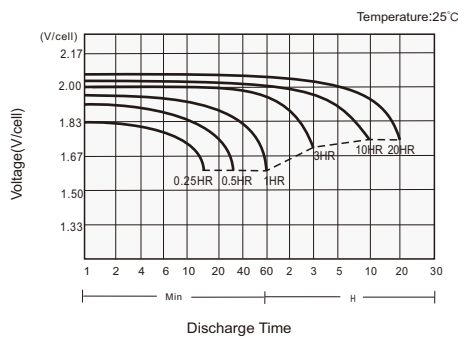
GENERAL FEATURES

- 5 years design life (25°C)
- 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

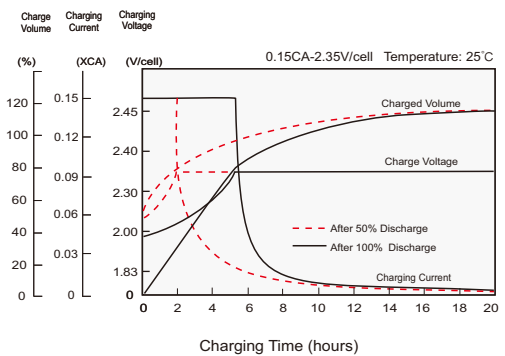
STANDARDS

- 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

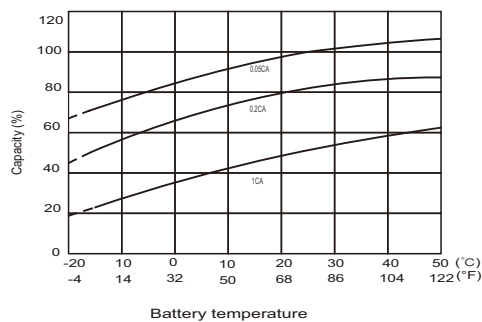
Discharge Characteristics



Charging Characteristics



Effects of Temperature on Capacity



Self Discharge Characteristics

