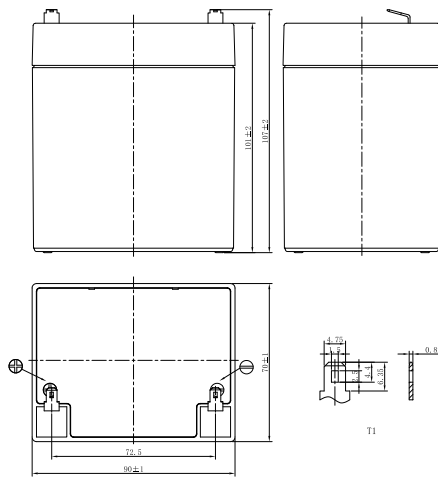


# LP SERIES-GENERAL PURPOSE

## LP12-4.0 (12V4.0Ah)



### CHARACTERISTICS

Item	Specifications	
Rated Voltage	12V	
Nominal Capacity (25°C)	C <sub>20</sub> : 1.75V/cell	4.0Ah
Dimension	Length	90mm (3.54inches)
	Width	70mm (2.76inches)
	Container Height	101mm (3.98inches)
	Total Height	107mm (4.21inches)
Approx Weight	1.26kg (2.78lbs)	
Terminal	T1/T2	
Container Material	ABS (UL94 HB or V-0 optional)	
Short-circuit current	112A	
Internal Resistance (25°C)	Approx 63 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	9.60	7.09	5.63	4.66	3.46	2.62	2.14	1.63	1.36	0.978	0.778	0.662	0.566	0.445	0.363	0.195
1.80V/cell	10.5	7.45	5.85	4.80	3.55	2.67	2.18	1.65	1.38	0.990	0.789	0.671	0.574	0.450	0.367	0.198
1.75V/cell	11.3	7.81	6.06	4.94	3.64	2.72	2.22	1.68	1.40	1.01	0.799	0.679	0.581	0.456	0.372	0.200
1.70V/cell	12.1	8.18	6.27	5.09	3.72	2.77	2.26	1.71	1.43	1.02	0.811	0.688	0.589	0.461	0.376	0.202
1.67V/cell	12.6	8.40	6.41	5.18	3.77	2.81	2.28	1.73	1.44	1.03	0.817	0.694	0.593	0.465	0.379	0.203
1.60V/cell	13.8	8.91	6.70	5.38	3.88	2.88	2.33	1.76	1.47	1.05	0.833	0.706	0.603	0.472	0.385	0.206

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	18.3	13.6	10.8	8.96	6.70	5.07	4.16	3.18	2.66	1.92	1.53	1.31	1.12	0.882	0.721	0.391
1.80V/cell	19.7	14.2	11.2	9.20	6.83	5.16	4.22	3.22	2.70	1.95	1.55	1.32	1.13	0.892	0.730	0.395
1.75V/cell	21.2	14.8	11.5	9.40	6.97	5.24	4.28	3.26	2.73	1.97	1.57	1.34	1.15	0.902	0.738	0.399
1.70V/cell	22.6	15.4	11.9	9.70	7.09	5.32	4.34	3.31	2.77	2.00	1.59	1.35	1.16	0.912	0.746	0.403
1.67V/cell	23.5	15.8	12.1	9.80	7.17	5.37	4.38	3.33	2.79	2.01	1.60	1.36	1.17	0.919	0.751	0.406
1.60V/cell	25.3	16.6	12.5	10.1	7.35	5.48	4.46	3.39	2.84	2.04	1.63	1.38	1.18	0.933	0.762	0.411

# LP SERIES-GENERAL PURPOSE

## LP12-4.0 (12V4.0Ah)



### 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

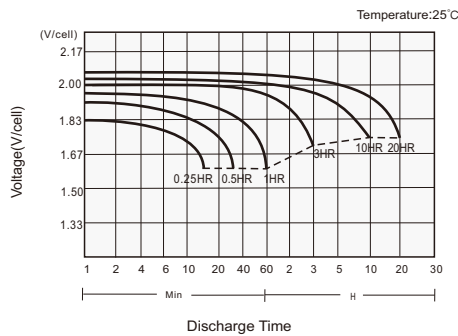
### GENERAL FEATURES

- 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

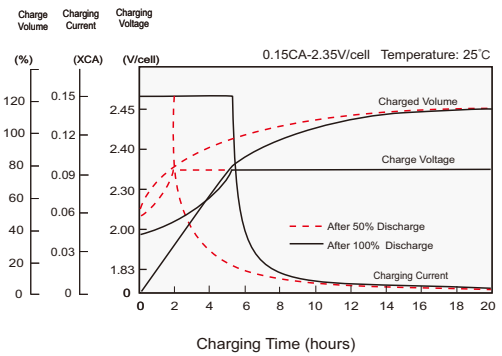
### STANDARDS

- 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

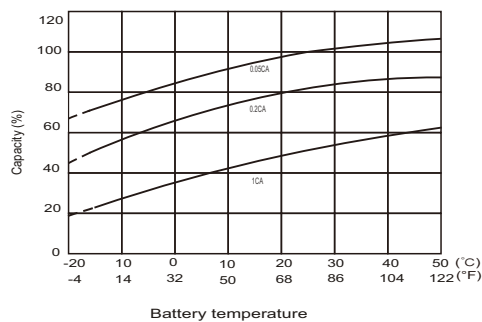
#### Discharge Characteristics



#### Charging Characteristics



#### Effects of Temperature on Capacity



#### Self Discharge Characteristics

