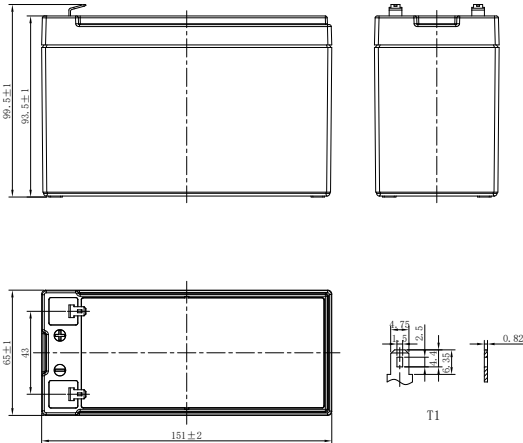


# LCP SERIES-PUNCH BATTERY

## LCP12-24W (12V24W)



### CHARACTERISTICS

Item	Specifications	
Rated Voltage	12V	
Nominal Rate (25°C)	$W_{15}, 1.67V/cell$	24W/cell
Nominal Capacity (25°C)	$C_{20}, 1.75V/cell$	7Ah
Dimension	Length	151mm (5.94inches)
	Width	65mm (2.56inches)
	Container Height	93.5mm (3.68inches)
	Total Height	99.5mm (3.92inches)
Approx Weight	2.13kg (4.70lbs)	
Terminal	T1/T2	
Container Material	ABS (UL94 HB or V-0 optional)	
Short-circuit current	196A	
Internal Resistance (25°C)	Approx 31 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
	40°C (104°F)	103%
Effect of temp. to Capacity	25°C (77°F)	100%
	0°C (32°F)	86%
	≤3% per month at 25°C (77°F). LCP 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.	
Self Discharge		

### 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	19.5	13.1	10.2	8.58	6.32	4.63	3.81	2.81	2.22	1.63	1.32	1.14	0.990	0.790	0.647	0.342
1.80V/cell	21.0	13.9	10.7	8.92	6.51	4.76	3.90	2.87	2.27	1.66	1.34	1.16	1.01	0.800	0.656	0.346
1.75V/cell	22.1	14.5	11.1	9.17	6.68	4.86	3.98	2.92	2.31	1.68	1.36	1.17	1.02	0.810	0.662	0.350
1.70V/cell	23.2	15.0	11.4	9.44	6.85	4.97	4.05	2.97	2.34	1.71	1.37	1.19	1.03	0.820	0.669	0.353
1.67V/cell	24.0	15.5	11.7	9.63	6.97	5.05	4.11	3.01	2.37	1.72	1.39	1.20	1.04	0.830	0.674	0.356
1.60V/cell	25.4	16.1	12.1	9.92	7.16	5.17	4.21	3.07	2.42	1.76	1.41	1.22	1.05	0.840	0.682	0.359
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	38.2	25.8	21.4	16.5	12.2	8.99	7.40	5.49	4.36	3.20	2.60	2.25	1.96	1.57	1.29	0.684
1.80V/cell	40.7	27.2	22.3	17.1	12.5	9.20	7.56	5.58	4.43	3.25	2.63	2.28	1.99	1.59	1.30	0.692
1.75V/cell	42.5	28.1	22.9	17.5	12.8	9.36	7.69	5.67	4.49	3.29	2.66	2.30	2.01	1.61	1.31	0.700
1.70V/cell	44.0	29.0	23.5	17.9	13.1	9.53	7.80	5.75	4.55	3.34	2.70	2.33	2.03	1.62	1.33	0.706
1.67V/cell	45.2	29.6	24.0	18.2	13.3	9.66	7.91	5.81	4.59	3.36	2.72	2.35	2.04	1.63	1.34	0.711
1.60V/cell	47.0	30.5	24.7	18.7	13.6	9.84	8.05	5.91	4.67	3.42	2.76	2.38	2.07	1.65	1.35	0.719

# LCP SERIES-PUNCH BATTERY

## LCP12-24W (12V24W)



### 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

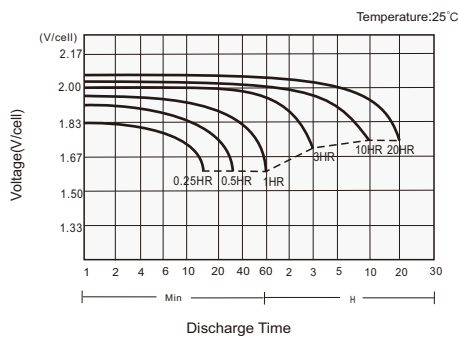
### GENERAL FEATURES

- 5 years design life (25°C)
- Lead calcium alloy, sealed design, no watering required
- Puncture resistant micro-porous glass mat separators extend life
- Automatic grid punch manufacturing process and unique technology optimizes power capacity, cell consistency, and long-term reliability and service life

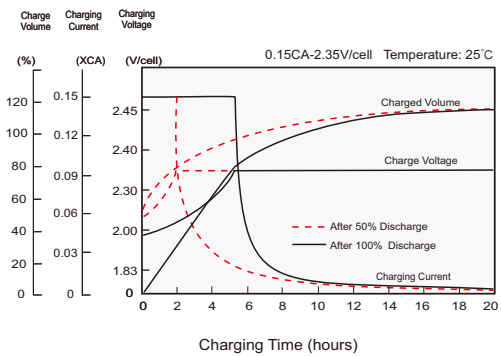
### STANDARDS

- 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

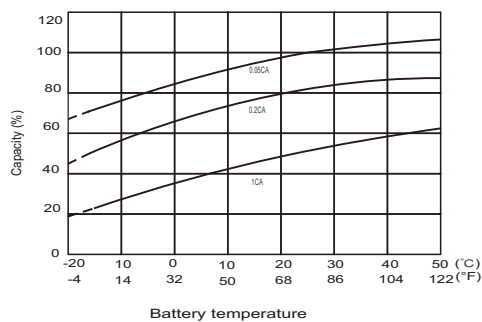
#### Discharge Characteristics



#### Charging Characteristics



#### Effects of Temperature on Capacity



#### Self Discharge Characteristics

