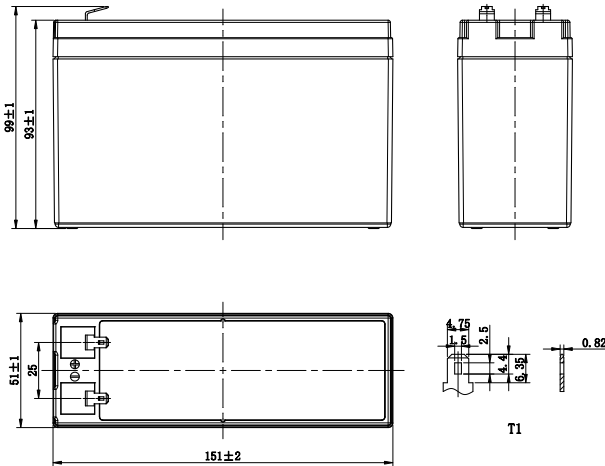


# LCP SERIES-PUNCH BATTERY

## LCP12-19W (12V19W)



### CHARACTERISTICS

Item	Specifications	
Rated Voltage	12V	
Nominal Rate (25°C)	$W_{15}, 1.67V/cell$	19W/cell
Nominal Capacity (25°C)	$C_{20}, 1.75V/cell$	5.5Ah
Dimension	Length	151mm (5.94inches)
	Width	51mm (2.01inches)
	Container Height	93mm (3.66inches)
	Total Height	99mm (3.90inches)
Approx Weight	1.75kg (3.86lbs)	
Terminal	T1/T2	
Container Material	ABS (UL94 HB or V-0 optional)	
Short-circuit current	154A	
Internal Resistance (25°C)	Approx 30 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	16.2	11.1	8.88	7.29	5.41	3.99	3.27	2.40	1.88	1.36	1.08	0.921	0.789	0.622	0.508	0.269
1.80V/cell	17.4	11.8	9.31	7.58	5.58	4.10	3.35	2.45	1.92	1.38	1.10	0.935	0.801	0.631	0.515	0.272
1.75V/cell	18.3	12.3	9.62	7.79	5.73	4.19	3.42	2.49	1.95	1.40	1.11	0.947	0.811	0.637	0.520	0.275
1.70V/cell	19.2	12.8	10.0	8.02	5.87	4.28	3.48	2.53	1.98	1.42	1.13	0.960	0.820	0.644	0.526	0.277
1.67V/cell	19.9	13.1	10.2	8.18	5.98	4.35	3.54	2.57	2.00	1.44	1.14	0.968	0.828	0.649	0.529	0.279
1.60V/cell	21.1	13.7	10.5	8.42	6.14	4.46	3.62	2.62	2.04	1.46	1.16	0.983	0.839	0.658	0.536	0.282
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	30.6	21.2	17.0	14.0	10.5	7.75	6.36	4.68	3.69	2.67	2.13	1.82	1.56	1.23	1.01	0.538
1.80V/cell	32.6	22.3	17.7	14.5	10.7	7.93	6.50	4.76	3.75	2.71	2.16	1.84	1.58	1.25	1.02	0.544
1.75V/cell	34.0	23.0	18.2	14.8	11.0	8.07	6.60	4.83	3.80	2.75	2.19	1.86	1.60	1.26	1.03	0.550
1.70V/cell	35.2	23.8	18.7	15.2	11.2	8.22	6.71	4.91	3.85	2.78	2.21	1.89	1.62	1.27	1.04	0.554
1.67V/cell	36.1	24.3	19.1	15.5	11.4	8.33	6.80	4.96	3.88	2.80	2.23	1.90	1.63	1.28	1.05	0.559
1.60V/cell	37.6	25.0	19.6	15.9	11.6	8.48	6.92	5.04	3.95	2.85	2.26	1.93	1.65	1.30	1.06	0.565

# LCP SERIES-PUNCH BATTERY

## LCP12-19W (12V19W)



### 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

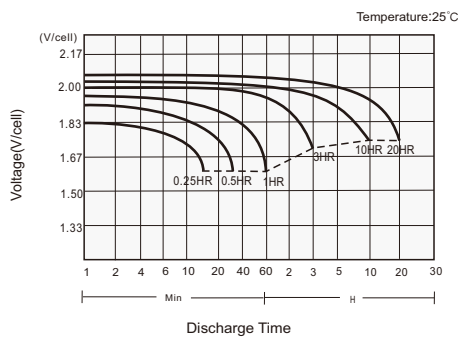
### GENERAL FEATURES

- 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

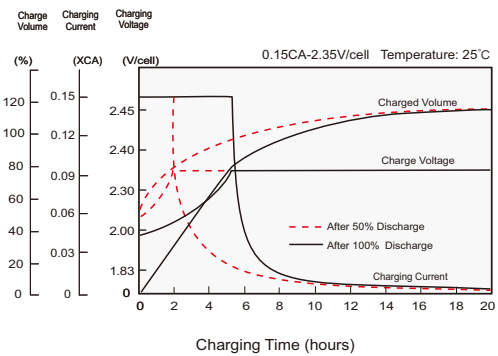
### STANDARDS

- 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

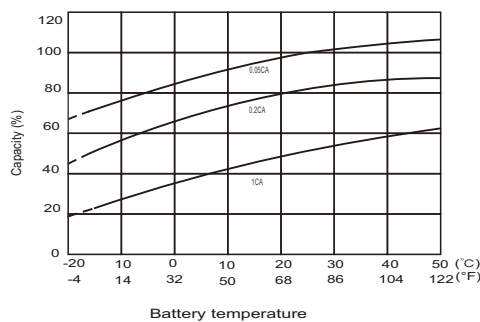
### Discharge Characteristics



### Charging Characteristics



### Effects of Temperature on Capacity



### Self Discharge Characteristics

