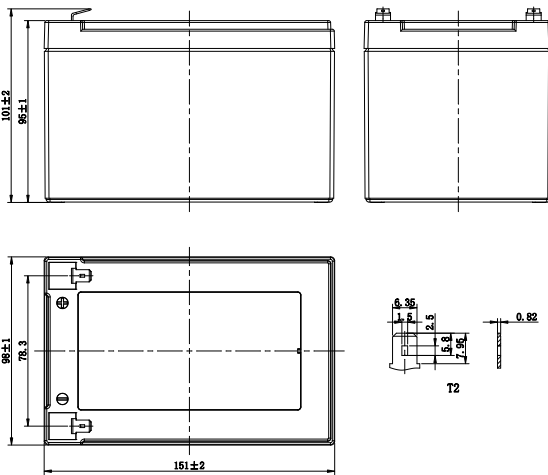


LCP SERIES-PUNCH BATTERY

LCP12-12 (12V12Ah)



CHARACTERISTICS

| Item | Specifications | |
|-------------------------------|---|---------------------|
| Rated Voltage | 12V | |
| Nominal Capacity (25°C) | C ₂₀ , 1.75V/cell | 12Ah |
| Nominal Rate (25°C) | W ₁₅ , 1.67V/cell | 40W/cell |
| Dimension | Length | 151mm (5.94inches) |
| | Width | 88mm (3.86inches) |
| | Container Height | 95mm (3.74inches) |
| | Total Height | 101mm (3.98inches) |
| Approx Weight | 3.38kg (7.45lbs) | |
| Terminal | T1/T2 | |
| Container Material | ABS (UL94 HB or V-0 optional) | |
| Short-circuit current | 336A | |
| Internal Resistance (25°C) | Approx 18 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 | 30.6 | 22.7 | 18.1 | 14.8 | 11.0 | 8.07 | 6.59 | 4.81 | 3.82 | 2.91 | 2.34 | 1.99 | 1.70 | 1.34 | 1.09 | 0.587 |
| 1.80V/cell | 33.2 | 23.9 | 18.8 | 15.2 | 11.3 | 8.23 | 6.72 | 4.90 | 3.88 | 2.95 | 2.37 | 2.01 | 1.72 | 1.35 | 1.10 | 0.594 |
| 1.75V/cell | 35.9 | 25.1 | 19.5 | 15.7 | 11.5 | 8.39 | 6.84 | 4.98 | 3.94 | 3.00 | 2.40 | 2.04 | 1.74 | 1.37 | 1.12 | 0.600 |
| 1.70V/cell | 38.6 | 26.2 | 20.2 | 16.2 | 11.8 | 8.55 | 6.96 | 5.06 | 4.01 | 3.04 | 2.43 | 2.07 | 1.77 | 1.39 | 1.13 | 0.606 |
| 1.67V/cell | 40.2 | 26.9 | 20.6 | 16.4 | 12.0 | 8.65 | 7.03 | 5.11 | 4.04 | 3.07 | 2.45 | 2.08 | 1.78 | 1.40 | 1.14 | 0.609 |
| 1.60V/cell | 43.7 | 28.6 | 21.6 | 17.1 | 12.3 | 8.88 | 7.20 | 5.22 | 4.12 | 3.13 | 2.50 | 2.12 | 1.81 | 1.42 | 1.16 | 0.618 |
| 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 | 58.2 | 43.5 | 35.8 | 28.4 | 21.2 | 15.7 | 12.8 | 9.40 | 7.49 | 5.72 | 4.60 | 3.92 | 3.36 | 2.65 | 2.17 | 1.17 |
| 1.80V/cell | 62.7 | 45.4 | 37.0 | 29.2 | 21.7 | 15.9 | 13.0 | 9.50 | 7.58 | 5.79 | 4.66 | 3.97 | 3.40 | 2.68 | 2.19 | 1.19 |
| 1.75V/cell | 67.3 | 47.4 | 38.1 | 29.9 | 22.1 | 16.2 | 13.2 | 9.70 | 7.68 | 5.87 | 4.72 | 4.02 | 3.44 | 2.71 | 2.22 | 1.20 |
| 1.70V/cell | 71.8 | 49.3 | 39.3 | 30.7 | 22.5 | 16.4 | 13.4 | 9.80 | 7.78 | 5.94 | 4.77 | 4.06 | 3.48 | 2.74 | 2.24 | 1.21 |
| 1.67V/cell | 74.6 | 50.5 | 40.0 | 31.1 | 22.8 | 16.6 | 13.5 | 9.90 | 7.84 | 5.98 | 4.80 | 4.09 | 3.50 | 2.76 | 2.26 | 1.22 |
| 1.60V/cell | 80.4 | 53.1 | 41.5 | 32.1 | 23.3 | 16.9 | 13.8 | 10.0 | 7.97 | 6.08 | 4.88 | 4.15 | 3.56 | 2.80 | 2.29 | 1.24 |

LCP SERIES-PUNCH BATTERY

LCP12-12 (12V12Ah)



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

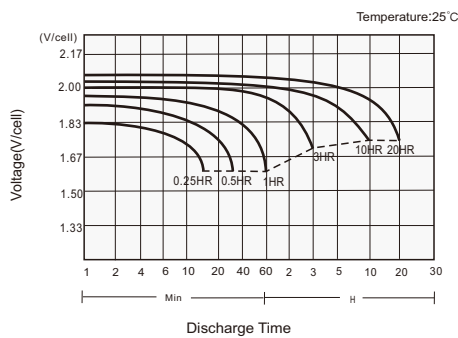
GENERAL FEATURES

- 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

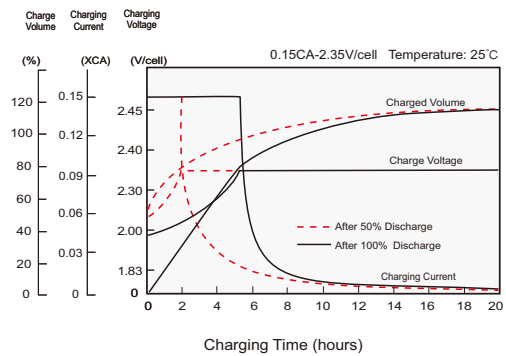
STANDARDS

- 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

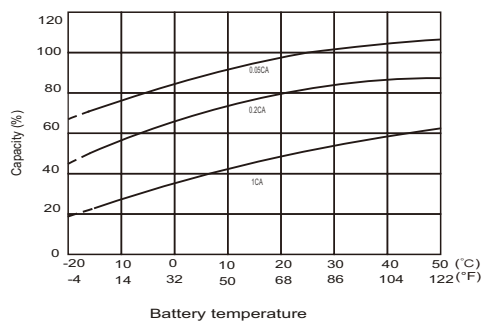
Discharge Characteristics



Charging Characteristics



Effects of Temperature on Capacity



Self Discharge Characteristics

