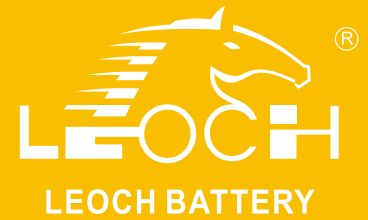




LPL Series-Long Standby Life

LPL12-28(12V28Ah)

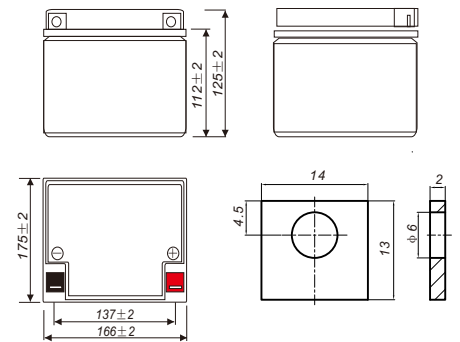


Specifications

| | | |
|-------------------------------|--|--------------------------------|
| Rated Voltage | 12V | |
| Nominal Capacity | 28.0Ah | (C ₂₀ , 1.75V/cell) |
| Dimension | Length | 166±2mm (6.54 inches) |
| | Width | 175±2mm (6.93 inches) |
| | Container Height | 125±2mm (4.92 inches) |
| | Total Height | 125±2mm (4.92 inches) |
| Approx Weight | 8.6 Kg (18.96 lbs) | |
| Terminal | T3 | |
| Container Material | ABS | |
| Rated Capacity (25°C) | 28.00 Ah | (20hr, 1.40A, 1.75V/cell) |
| | 26.30 Ah | (10hr, 2.63A, 1.75V/cell) |
| | 23.85 Ah | (5hr, 4.77A, 1.75V/cell) |
| | 21.87 Ah | (3hr, 7.29A, 1.75V/cell) |
| | 18.40 Ah | (1hr, 18.4A, 1.60V/cell) |
| Max. Discharge Current | 420A (5s) | |
| Internal Resistance (25°C) | Approx 12.0mΩ | |
| 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) | |
| Cycle Use | Initial Charging Current less than 8.4A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C | |
| | Initial Charging Current less than 8.4A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C | |
| Standby Use | Initial Charging Current less than 8.4A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C | |
| Effect of temp. to Capacity | 40°C (104°F) | 103% |
| | 25°C (77°F) | 100% |
| | 0°C (32°F) | 86% |
| Self Discharge | LPL series batteries may be stored for 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. | |



Layout



Constant Current Discharge (Amperes) at 25 °C (77°F)

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 53.2 | 42.7 | 36.2 | 26.9 | 20.6 | 16.9 | 9.68 | 7.07 | 5.58 | 4.64 | 3.97 | 3.12 | 2.57 | 1.37 |
| 1.80V/cell | 55.9 | 44.4 | 37.3 | 27.6 | 21.0 | 17.2 | 9.83 | 7.18 | 5.66 | 4.71 | 4.02 | 3.16 | 2.60 | 1.39 |
| 1.75V/cell | 58.6 | 46.0 | 38.4 | 28.2 | 21.5 | 17.5 | 9.98 | 7.29 | 5.74 | 4.77 | 4.07 | 3.20 | 2.63 | 1.40 |
| 1.70V/cell | 61.4 | 47.6 | 39.6 | 28.9 | 21.9 | 17.8 | 10.1 | 7.39 | 5.81 | 4.83 | 4.13 | 3.24 | 2.66 | 1.41 |
| 1.65V/cell | 63.0 | 48.6 | 40.2 | 29.3 | 22.1 | 18.0 | 10.2 | 7.46 | 5.86 | 4.87 | 4.16 | 3.26 | 2.68 | 1.42 |
| 1.60V/cell | 66.8 | 50.8 | 41.8 | 30.2 | 22.7 | 18.4 | 10.4 | 7.60 | 5.97 | 4.95 | 4.23 | 3.31 | 2.72 | 1.44 |

Constant Power Discharge (Watts/cell) at 25 °C (77°F)

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 101.8 | 82.0 | 69.6 | 52.0 | 40.0 | 32.8 | 19.0 | 13.9 | 11.0 | 9.17 | 7.86 | 6.19 | 5.11 | 2.74 |
| 1.80V/cell | 106.3 | 84.8 | 71.5 | 53.1 | 40.7 | 33.3 | 19.2 | 14.1 | 11.1 | 9.28 | 7.95 | 6.26 | 5.16 | 2.77 |
| 1.75V/cell | 110.9 | 87.4 | 73.2 | 54.1 | 41.3 | 33.8 | 19.4 | 14.3 | 11.3 | 9.39 | 8.04 | 6.33 | 5.22 | 2.80 |
| 1.70V/cell | 115.4 | 90.0 | 75.1 | 55.1 | 42.0 | 34.3 | 19.7 | 14.4 | 11.4 | 9.49 | 8.13 | 6.40 | 5.28 | 2.83 |
| 1.65V/cell | 118.1 | 91.7 | 76.2 | 55.7 | 42.3 | 34.5 | 19.9 | 14.5 | 11.5 | 9.55 | 8.19 | 6.44 | 5.32 | 2.85 |
| 1.60V/cell | 124.3 | 95.1 | 78.6 | 57.1 | 43.2 | 35.2 | 20.2 | 14.8 | 11.7 | 9.70 | 8.31 | 6.54 | 5.40 | 2.89 |



LPL Series-Long Standby Life

LPL12-28(12V28Ah)



Applications

- UPS and EPS
- Emergency light
- Railway signal and aircraft signal system
- Marine and power stations
- Alarm and security system
- Electronic apparatus and equipment
- Communication power supply, DC power supply

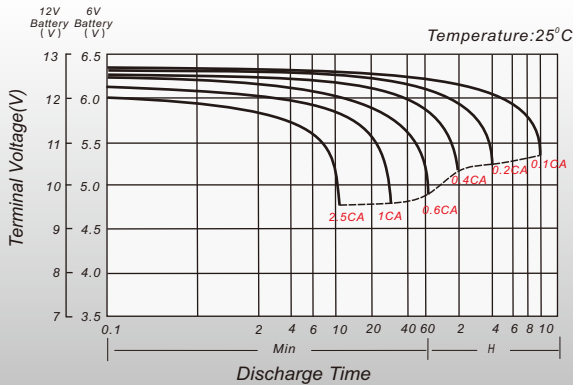
General Features

- 10 ~ 12 years design life(20°C)
- Grid refining technology and the thicker plates are used to extend the battery standby life and reduce the plate grid corrosion speed
- Using oxygen recombination technology: maintenance-free
- Unique vent valve design: control water losing, prevent air and spark going inside

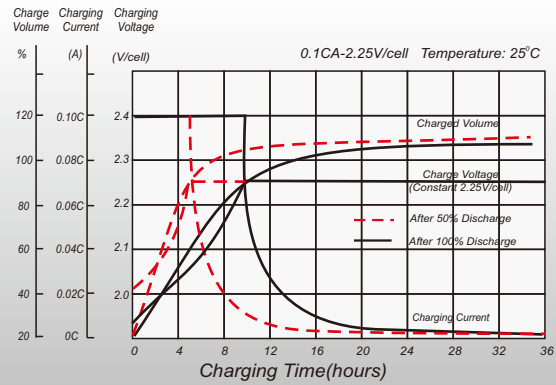
Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified
- Manufactured in Leoch@IATF16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

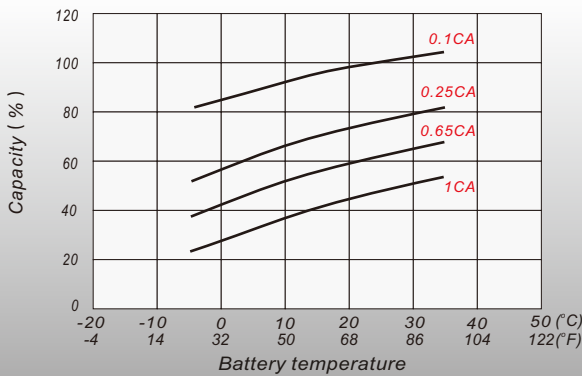
Discharge Characteristics



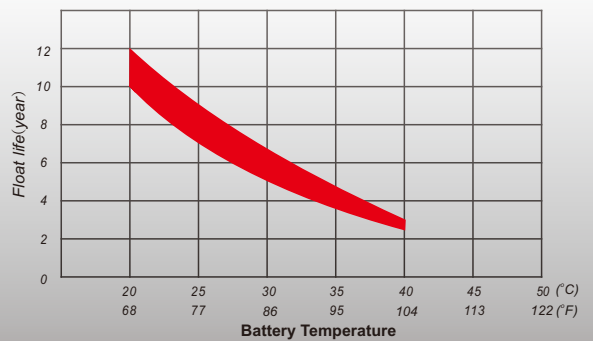
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Float Service Life



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