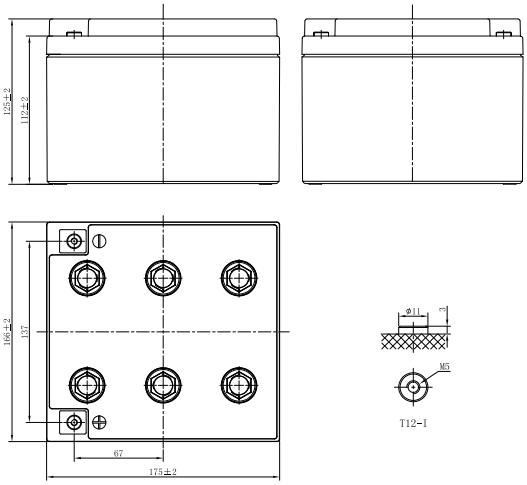
# LPG SERIES-GEL BATTERY

LPG12-24 (12V24Ah)

LEOCH BATTERY




## CHARACTERISTICS

| Item | | Specifications |
|---|---|---|
| Rated Voltage | | 12V |
| Nominal Capacity (25˚C) | $C_{20}$,1.80V/cell | 24Ah |
| Dimension | Length | 166mm (6.54inches) |
| | Width | 175mm (6.89inches) |
| | Container Height | 125mm (4.92inches) |
| | Total Height | 125mm (4.92inches) |
| Approx Weight | | 8.5kg (18.7lbs) |
| Terminal | | T12-I/T12(M5) |
| Container Material | | ABS (UL94 HB or V-0 optional) |
| Short-circuit current | | 600A |
| Internal Resistance (25˚C) | | Approx 20 mΩ (Fully charged) |
| Operating Temp. Range | Discharge | -20~60˚C (-4~140°F) |
| | Charge | -20~40˚C (-4~104°F) |
| | Storage | -20~50˚C (-4~122°F) |
| Nominal Operating Temp. Range | | 25±3˚C (77±5°F) |
| Max.Charging Current (25˚C) | | 0.25C |
| Charge voltage (25˚C) | Standby Use | Cycle Use |
| | 2.23-2.27V/cell | 2.35-2.40V/cell |
| Temp. Coeffcient | -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 | ≤2.5% per month at 25°C (77°F). LPG series batteries may be stored up to 9 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 | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
| 1.85V/cell | 20.3 | 15.9 | 12.2 | 10.2 | 6.46 | 4.92 | 4.07 | 3.52 | 3.04 | 2.42 | 2.10 | 1.15 |
| 1.80V/cell | 23.3 | 17.8 | 13.4 | 11.2 | 6.98 | 5.27 | 4.32 | 3.70 | 3.19 | 2.54 | 2.19 | 1.20 |
| 1.75V/cell | 26.1 | 19.6 | 14.5 | 12.0 | 7.40 | 5.57 | 4.52 | 3.84 | 3.30 | 2.62 | 2.23 | 1.22 |
| 1.70V/cell | 28.2 | 21.0 | 15.4 | 12.7 | 7.85 | 5.80 | 4.67 | 3.96 | 3.42 | 2.70 | 2.28 | 1.24 |
| 1.67V/cell | 29.3 | 21.8 | 15.9 | 13.2 | 8.05 | 5.98 | 4.79 | 4.04 | 3.47 | 2.74 | 2.31 | 1.25 |
| 1.60V/cell | 31.8 | 23.3 | 17.1 | 14.0 | 8.38 | 6.22 | 4.97 | 4.17 | 3.56 | 2.79 | 2.36 | 1.27 |
| **Constant Power Discharge (Watts/cell) at 25°C (77°F)** | | | | | | | | | | | | |
| F.V/Time | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
| 1.85V/cell | 38.9 | 30.7 | 23.6 | 19.8 | 12.6 | 9.64 | 8.00 | 6.95 | 6.01 | 4.82 | 4.18 | 2.30 |
| 1.80V/cell | 43.9 | 34.0 | 25.8 | 21.8 | 13.6 | 10.3 | 8.50 | 7.27 | 6.29 | 5.04 | 4.36 | 2.39 |
| 1.75V/cell | 48.8 | 37.0 | 27.7 | 23.2 | 14.4 | 10.8 | 8.80 | 7.53 | 6.50 | 5.19 | 4.44 | 2.44 |
| 1.70V/cell | 52.0 | 39.3 | 29.2 | 24.4 | 15.1 | 11.3 | 9.10 | 7.74 | 6.71 | 5.34 | 4.54 | 2.47 |
| 1.67V/cell | 53.5 | 40.4 | 30.0 | 25.1 | 15.5 | 11.6 | 9.30 | 7.88 | 6.80 | 5.41 | 4.58 | 2.49 |
| 1.60V/cell | 57.4 | 42.9 | 32.0 | 26.6 | 16.0 | 12.0 | 9.60 | 8.10 | 6.94 | 5.49 | 4.67 | 2.52 |

# LPG SERIES-GEL BATTERY

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## APPLICATIONS

- Telecommunications
- Solar system
- Wind power system
- Engine starting
- Wheelchair, Floor cleaning machines, Golf trolley, Boats

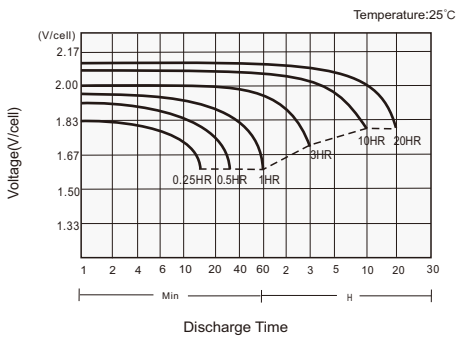
## GENERAL FEATURES

- 10~12 years design life (25℃)
- Gelled electrolyte for superior thermal management, long float life
- Efficient gas recombination decreases gassing/water and extends battery life
- Robust design - resilient in harsh conditions
- Proof against deep discharge - greater long-term energy delivery and cycle life

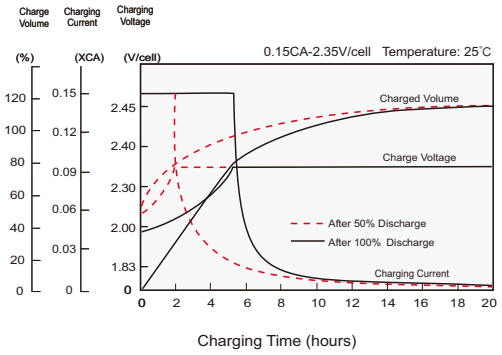
## STANDARDS

- IEC60896 Certified
- Classified as"General Purpose" according to Eurobat
- UL,CE Approved
- Manufactured in Leoch®IATF16949, ISO 45001,ISO 9001 and ISO 14001 certified production facilities

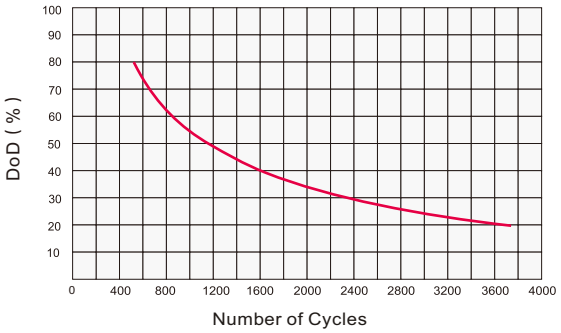
## Discharge Characteristics



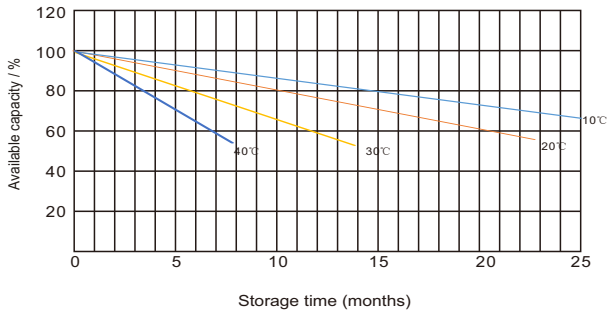

## Charging Characteristics




## Cycle Life in Relation to DoD




## Self Discharge Characteristics





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