



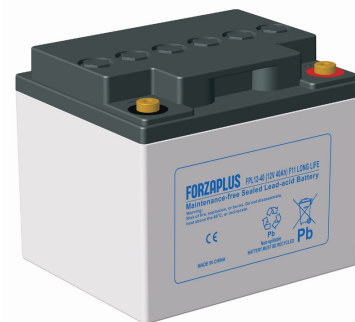
FPL Series-Long Standby Life

FPL12-40

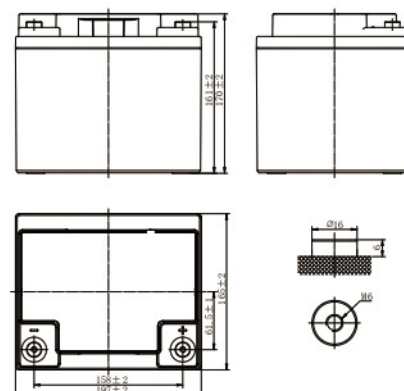
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Specifications

| | | |
|-------------------------------|--|--------------------------------|
| Rated Voltage | 12V | |
| Nominal Capacity | 38.0Ah | (C ₁₀ , 1.80V/cell) |
| Dimension | Length | 197±2mm (7.76 inches) |
| | Width | 165±2mm (6.50 inches) |
| | Container Height | 170±2mm (6.69 inches) |
| | Total Height | 170±2mm (6.69 inches) |
| Approx Weight | 12.7 Kg (28.0 lbs) | |
| Terminal | M6 | |
| Container Material | ABS | |
| Rated Capacity (25°C) | 40.0Ah | (20hr, 2.00A, 1.80V/cell) |
| | 38.0Ah | (10hr, 3.80A, 1.80V/cell) |
| | 34.6Ah | (5hr, 6.92A, 1.75V/cell) |
| | 31.5Ah | (3hr, 10.5A, 1.75V/cell) |
| | 24.2Ah | (1hr, 24.2A, 1.60V/cell) |
| Max. Discharge Current | 380A (5s) | |
| Internal Resistance (25°C) | Approx 10.0mΩ | |
| 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 11.4A. Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C | |
| | Standby Use | |
| Effect of temp. to Capacity | Initial Charging Current less than 11.4A. Voltage 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C | |
| | 40°C (104°F) | 103% |
| | 25°C (77°F) | 100% |
| Self Discharge | 0°C (32°F) | 86% |
| | 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 (77F)

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 56.2 | 48.7 | 38.3 | 34.3 | 25.1 | 21.2 | 12.9 | 9.49 | 7.44 | 6.46 | 5.69 | 4.38 | 3.63 | 1.93 |
| 1.80V/cell | 63.8 | 55.2 | 43.3 | 37.3 | 26.6 | 22.0 | 13.4 | 10.3 | 7.95 | 6.79 | 6.12 | 4.61 | 3.80 | 2.00 |
| 1.75V/cell | 69.2 | 59.8 | 46.8 | 38.1 | 27.5 | 23.1 | 14.1 | 10.5 | 8.09 | 6.92 | 6.17 | 4.63 | 3.84 | 2.01 |
| 1.70V/cell | 73.8 | 63.5 | 49.6 | 38.8 | 28.1 | 23.5 | 14.3 | 10.7 | 8.24 | 7.03 | 6.20 | 4.70 | 3.88 | 2.03 |
| 1.65V/cell | 76.1 | 65.4 | 51.0 | 39.4 | 28.5 | 23.9 | 14.6 | 10.8 | 8.36 | 7.17 | 6.23 | 4.77 | 3.93 | 2.06 |
| 1.60V/cell | 78.7 | 67.4 | 52.3 | 40.0 | 28.9 | 24.2 | 14.8 | 10.9 | 8.46 | 7.27 | 6.27 | 4.83 | 3.97 | 2.08 |

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

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 105.8 | 92.3 | 72.9 | 65.5 | 48.2 | 41.1 | 25.2 | 18.5 | 14.6 | 12.7 | 11.3 | 8.69 | 7.22 | 3.83 |
| 1.80V/cell | 118.3 | 103.2 | 81.6 | 70.7 | 50.7 | 42.3 | 25.9 | 20.0 | 15.5 | 13.3 | 12.0 | 9.12 | 7.55 | 3.97 |
| 1.75V/cell | 126.3 | 110.2 | 87.0 | 71.6 | 52.2 | 44.2 | 27.1 | 20.4 | 15.8 | 13.5 | 12.1 | 9.14 | 7.61 | 4.00 |
| 1.70V/cell | 132.7 | 115.8 | 91.5 | 72.5 | 52.9 | 44.8 | 27.5 | 20.7 | 16.0 | 13.7 | 12.1 | 9.27 | 7.68 | 4.04 |
| 1.65V/cell | 134.9 | 117.7 | 93.0 | 73.0 | 53.4 | 45.2 | 27.8 | 20.8 | 16.2 | 13.9 | 12.2 | 9.38 | 7.77 | 4.08 |
| 1.60V/cell | 136.8 | 119.4 | 94.3 | 73.3 | 53.7 | 45.6 | 28.0 | 20.9 | 16.3 | 14.1 | 12.2 | 9.48 | 7.85 | 4.13 |



FPL Series-Long Standby Life FPL12-40

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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

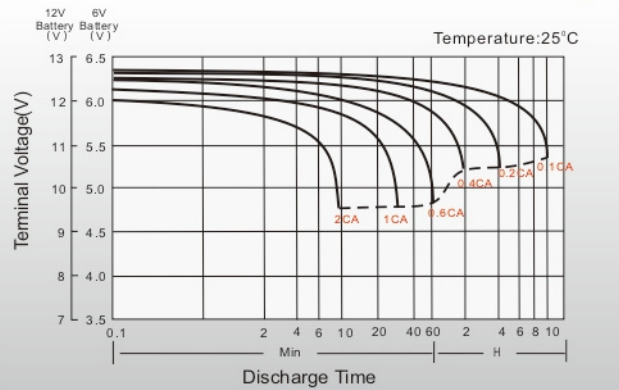
General features

- 12 years design life (25°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

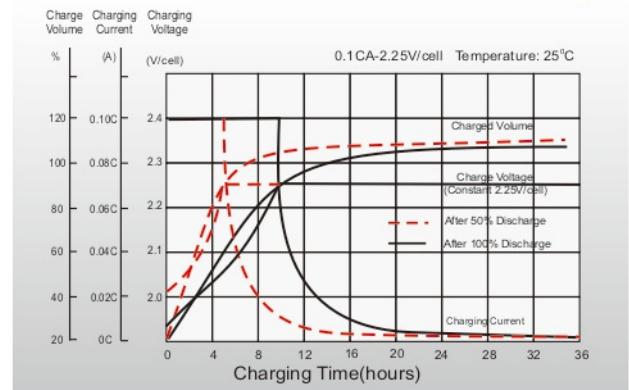
Standards

- 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

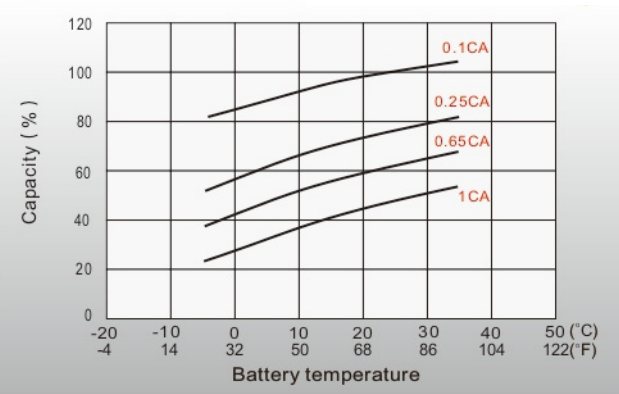
Discharge Characteristics



Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life

