



LPF Series-Front Terminal

LPF12-90(12V90Ah)

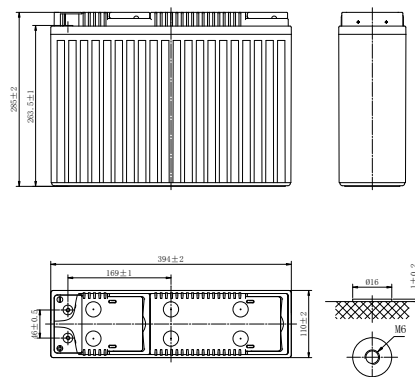


Specifications

| | | |
|-------------------------------|--|---------------------------|
| Rated Voltage | 12V | |
| Nominal Capacity | $C_{10}, 1.80V/cell$ | 90.0Ah |
| Dimension | Length | 394±2mm (15.5 inches) |
| | Width | 110±2mm (4.33 inches) |
| | Container Height | 285±2mm (11.2 inches) |
| | Total Height | 285±2mm (11.2 inches) |
| Approx Weight | 31.0 Kg (68.4 lbs) | |
| Terminal | M6 | |
| Container Material | ABS | |
| Rated Capacity (25°C) | 100.0 Ah | (20hr, 5.00A, 1.80V/cell) |
| | 90.0 Ah | (10hr, 9.00A, 1.80V/cell) |
| | 88.8 Ah | (8hr, 11.1A, 1.75V/cell) |
| | 82.0 Ah | (5hr, 16.4A, 1.75V/cell) |
| | 62.3 Ah | (1hr, 62.3A, 1.60V/cell) |
| Max. Discharge Current | 900A (5s) | |
| Internal Resistance (25°C) | Approx 5.5mΩ | |
| 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 27.0A. Voltage 14.1V~14.4V at 25°C(77°F)Temp. Coefficient -30mV/°C | |
| | Initial Charging Current less than 27.0A. 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 | LPF 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 | 136.5 | 119.2 | 106.1 | 85.7 | 66.8 | 54.1 | 31.5 | 22.9 | 18.3 | 15.4 | 13.4 | 10.5 | 8.58 | 4.78 |
| 1.80V/cell | 155.1 | 132.7 | 116.1 | 92.1 | 70.7 | 56.9 | 32.8 | 23.9 | 19.1 | 16.2 | 14.1 | 10.8 | 9.00 | 5.00 |
| 1.75V/cell | 170.8 | 144.7 | 123.4 | 95.8 | 73.4 | 58.6 | 33.5 | 24.2 | 19.4 | 16.4 | 14.2 | 11.1 | 9.55 | 5.05 |
| 1.70V/cell | 183.9 | 152.9 | 130.0 | 100.2 | 75.5 | 60.1 | 34.1 | 24.6 | 19.7 | 16.6 | 14.5 | 11.3 | 9.61 | 5.08 |
| 1.67V/cell | 192.0 | 159.3 | 134.5 | 102.8 | 77.1 | 61.4 | 34.7 | 25.0 | 19.9 | 16.8 | 14.6 | 11.4 | 9.69 | 5.11 |
| 1.60V/cell | 199.6 | 164.4 | 137.9 | 104.9 | 78.3 | 62.3 | 35.3 | 25.3 | 20.1 | 17.0 | 14.7 | 11.5 | 9.74 | 5.14 |

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 | 260.0 | 228.9 | 205.2 | 166.9 | 131.0 | 106.2 | 62.3 | 45.5 | 36.6 | 30.9 | 26.9 | 21.2 | 18.2 | 9.66 |
| 1.80V/cell | 293.2 | 253.6 | 223.2 | 178.9 | 138.1 | 111.5 | 64.8 | 47.3 | 37.9 | 32.4 | 28.2 | 22.0 | 19.0 | 10.1 |
| 1.75V/cell | 320.6 | 274.7 | 236.0 | 185.1 | 142.9 | 114.6 | 65.9 | 48.0 | 38.5 | 32.6 | 28.5 | 22.2 | 19.1 | 10.1 |
| 1.70V/cell | 340.7 | 287.0 | 246.0 | 191.8 | 145.8 | 116.7 | 66.9 | 48.7 | 38.9 | 32.9 | 28.9 | 22.6 | 19.2 | 10.2 |
| 1.67V/cell | 350.1 | 294.6 | 251.3 | 194.5 | 147.5 | 118.1 | 67.7 | 49.1 | 39.2 | 33.1 | 29.2 | 22.8 | 19.4 | 10.2 |
| 1.60V/cell | 356.4 | 299.1 | 254.1 | 196.3 | 148.2 | 118.7 | 68.3 | 49.5 | 39.5 | 33.4 | 29.5 | 23.0 | 19.5 | 10.3 |



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Applications

- UPS
- For standard power cabinet
- Network connection equipment of communication system
- Power system of special network of local area network
- Power station systems

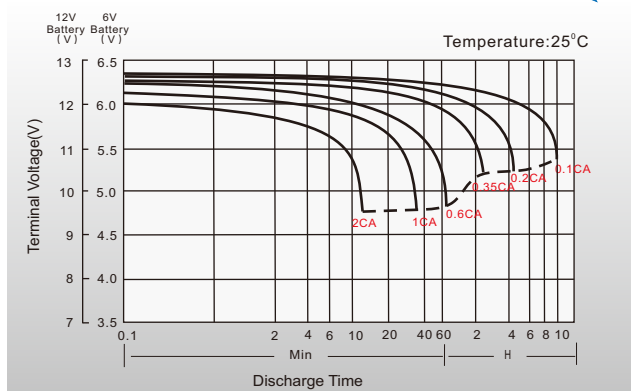
General Features

- 12 years design life(25°C)
- Specifically ideal for 19 inches or 23 inches power cabinets
- Front terminals make the installation, maintenance and supervision easy
- Shield designs protect terminals from short circuit and show good appearance
- Unique vent valve design: reduce water losing and prevent air/spark going inside

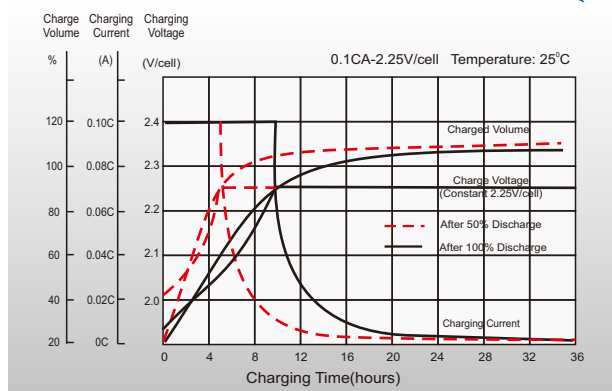
Standards

- 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

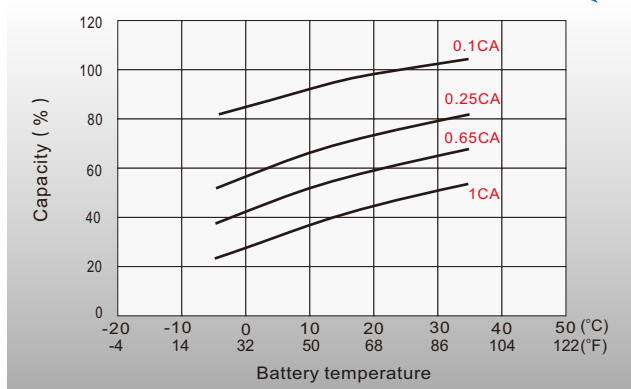
Discharge Characteristics



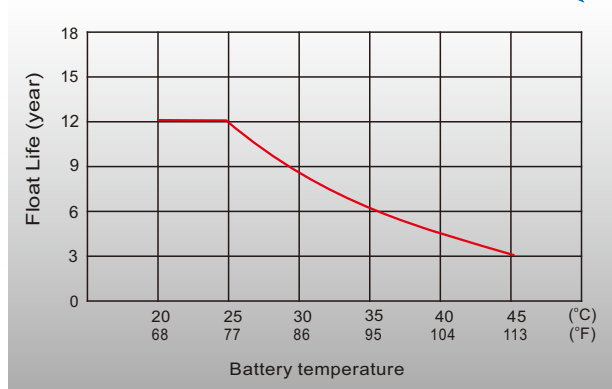
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



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