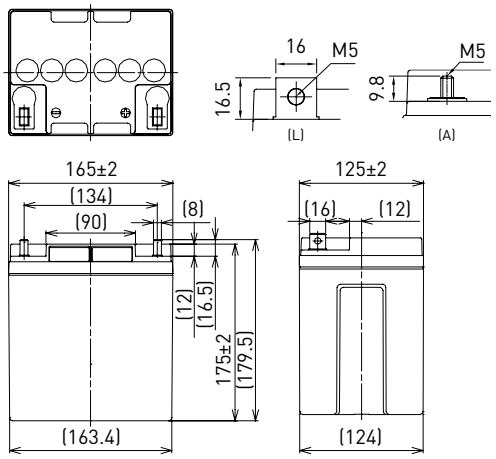
# LC-P1224PG/APG

FOR STANDBY POWER SUPPLIES.
EXPECTED TRICKLE DESIGN LIFE: 10 – 12 YEARS
AT 20°C ACCORDING TO EUROBAT.

VdS
G198049

## DIMENSIONS (MM)

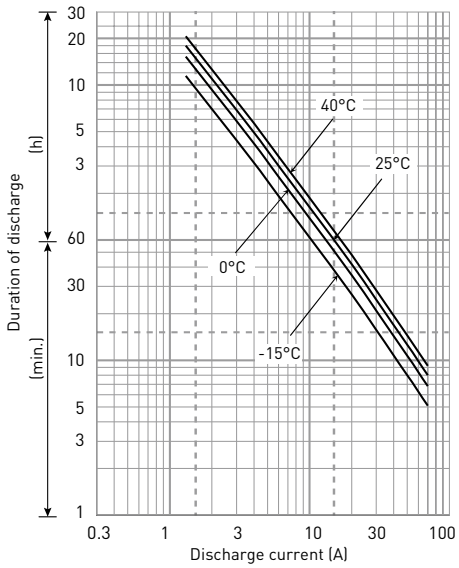
Terminal type (option)




Contents indicated (including the recycle marking, etc.) are subject to change without notice. Battery case resin: flame-retardant (UL94 V-0)

| Specifications | | LC-P1224PG/APG |
|---|---|---|
| Nominal voltage (V) | | 12 |
| Nominal capacity | 20 hours rate (Ah) | 24.0 |
| Dimensions | Length (mm) | 125 |
| | Width (mm) | 165 |
| | Total height (mm) | 179.5/175 |
| Approx. mass (kg) | | 8.05 |
| Terminal type | M5 bolt/nut & threaded post | |
| Capacity (25°C) | 20 hours rate (Ah) | 24.0 |
| | 10 hours rate (Ah) | 22.0 |
| | 3 hours rate (Ah) | 18.0 |
| | 1 hour rate (Ah) | 14.0 |
| Impedance (mΩ) | Fully charged battery (25°C) | 11 |
| Temperature dependency of capacity (%) – 20 hours rate | 40°C | 102 |
| | 25°C | 100 |
| | 0°C | 85 |
| | -15°C | 65 |
| Remaining capacity (25°C) | After 3 months (%) | 91 |
| | After 6 months (%) | 82 |
| | After 12 months (%) | 64 |

## DURATION OF DISCHARGE VS. DISCHARGE CURRENT




## WATT TABLE (25°C)

(Wattage/battery)

| Cut-off | 5min. | 10min. | 15min. | 20min. | 30min. | 45min. | 1h | 1.5h | 2h | 3h | 4h | 5h | 6h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.6V | 992 | 739 | 523 | 441 | 317 | 234 | 183 | 118 | 104 | 73.8 | 58.6 | 47.9 | 40.8 | 26.4 | 14.6 |
| 9.9V | 931 | 724 | 520 | 434 | 314 | 232 | 181 | 116 | 103 | 73.4 | 58.2 | 47.5 | 40.6 | 26.3 | 14.6 |
| 10.2V | 872 | 706 | 509 | 426 | 310 | 230 | 179 | 113 | 101 | 72.7 | 57.8 | 47.2 | 40.3 | 26.0 | 14.5 |
| 10.5V | 782 | 654 | 474 | 405 | 303 | 226 | 175 | 111 | 97.2 | 71.6 | 57.4 | 46.8 | 39.8 | 25.9 | 14.4 |
| 10.8V | 691 | 583 | 442 | 394 | 293 | 223 | 172 | 108 | 92.6 | 70.1 | 56.6 | 45.6 | 39.2 | 25.6 | 14.3 |

## AMPERE TABLE (25°C)

(Ampere/battery)

| Cut-off | 5min. | 10min. | 15min. | 20min. | 30min. | 45min. | 1h | 1.5h | 2h | 3h | 4h | 5h | 6h | 10h | 20h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9.6V | 89.0 | 66.0 | 45.5 | 38.0 | 27.1 | 19.9 | 14.6 | 10.0 | 8.80 | 6.20 | 4.90 | 3.89 | 3.40 | 2.27 | 1.23 |
| 9.9V | 83.5 | 64.7 | 45.2 | 37.4 | 26.8 | 19.8 | 14.5 | 9.80 | 8.73 | 6.17 | 4.87 | 3.86 | 3.39 | 2.26 | 1.22 |
| 10.2V | 78.2 | 63.0 | 44.3 | 36.8 | 26.5 | 19.6 | 14.3 | 9.60 | 8.51 | 6.11 | 4.84 | 3.83 | 3.36 | 2.23 | 1.21 |
| 10.5V | 70.1 | 58.4 | 41.2 | 34.9 | 25.9 | 19.3 | 14.0 | 9.40 | 8.21 | 6.01 | 4.80 | 3.80 | 3.32 | 2.22 | 1.20 |
| 10.8V | 62.0 | 52.1 | 38.4 | 34.0 | 25.0 | 19.0 | 13.7 | 9.14 | 7.82 | 5.89 | 4.74 | 3.71 | 3.27 | 2.20 | 1.19 |

All mentioned values are average values

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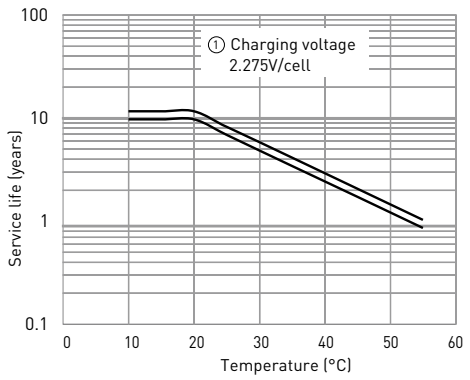
## CHARGING METHOD (25°C)

| | |
|---|---|
| **Cycle use** | Control voltage: 13.6V - 13.8V<br>Initial current: 3.6A or smaller |

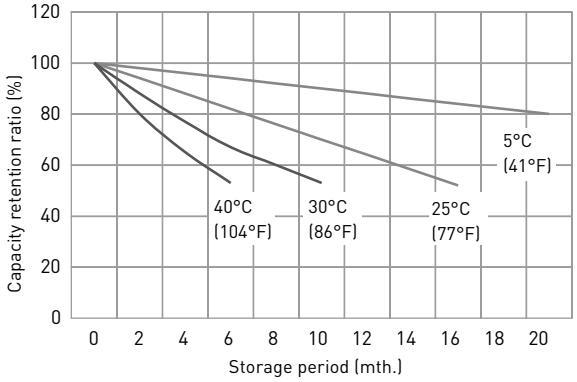
## CUT-OFF VOLTAGE

| **Discharge current** | 1.2A - 4.8A | 4.8A - 12A | 12A - 24A | 24A - 48A | 48A - 72A |
|---|---|---|---|---|---|
| **Cut-off voltage** | 10.5V | 10.2V | 9.9V | 9.3V | 8.7V |

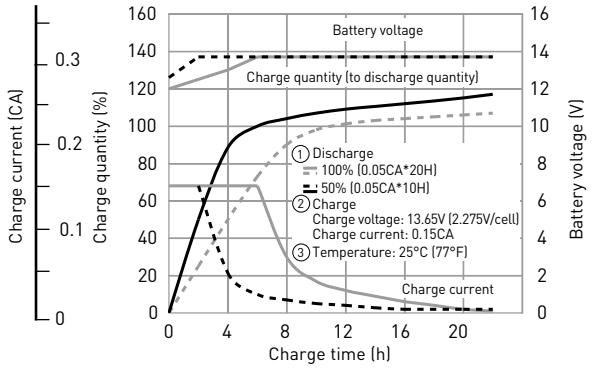
## INFLUENCE OF TEMPERATURE ON TRICKLE LIFE



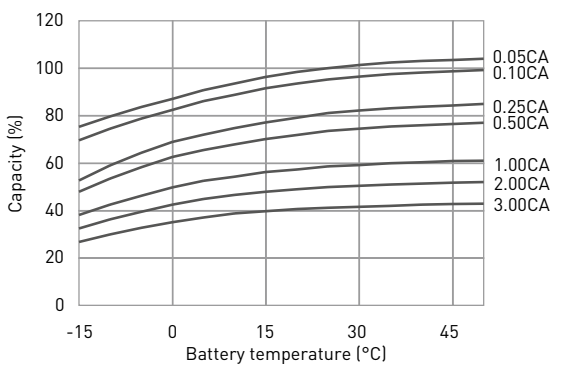

## RESIDUAL CAPACITY VS. STORAGE PERIOD



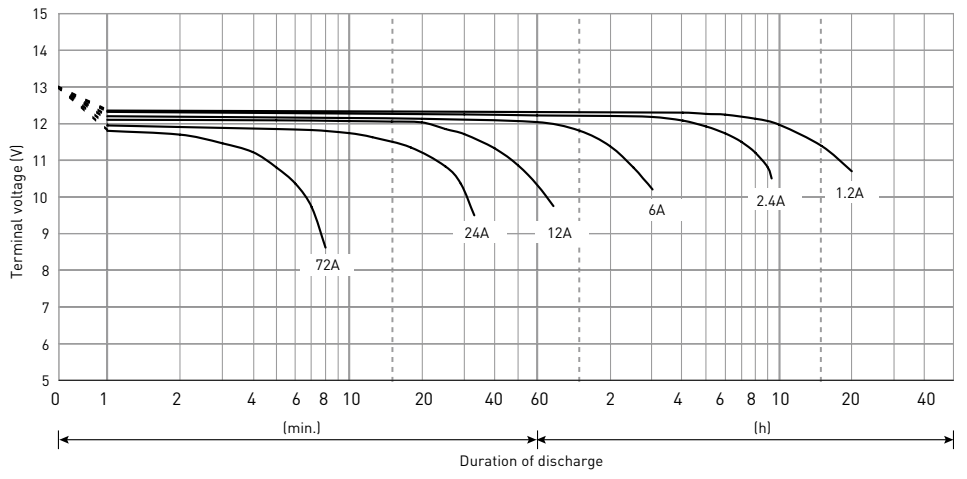

## CONSTANT-VOLTAGE CONSTANT-CURRENT CHARGE CHARACTERISTICS FOR TRICKLE USE




## DISCHARGE CAPACITY BY TEMPERATURE AND BY DISCHARGE CURRENT




## DISCHARGE CHARACTERISTICS

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