

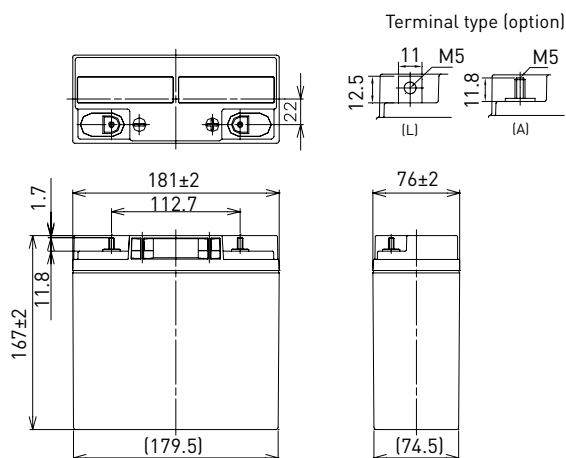
## LC-P1220P

## DIMENSIONS (MM)



Contents indicated (including the recycle marking, etc.) are subject to change without notice.

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

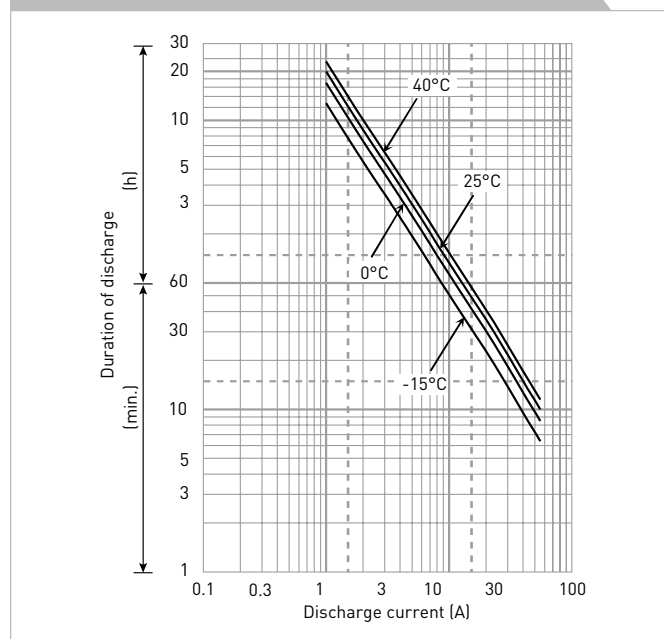


Battery case resin: flame retardant (UL94 V-0)

## SPECIFICATIONS

| Name                                              |                | LC-P1220P/AP                      |
|---------------------------------------------------|----------------|-----------------------------------|
| Nominal voltage                                   |                | 12V                               |
| Nominal capacity (20 hour rate)                   |                | 20Ah                              |
| Dimensions                                        | Length         | 181mm                             |
|                                                   | Width          | 76mm                              |
|                                                   | Height         | 167mm                             |
| Approx. mass                                      |                | 5.80kg                            |
| Terminal                                          |                | M5 bolt/nut & threaded post       |
| Capacity (25°C)                                   | 20 hour rate   | 20Ah                              |
|                                                   | 10 hour rate   | 17Ah                              |
|                                                   | 3 hour rate    | 15Ah                              |
|                                                   | 1 hour rate    | 12Ah                              |
| Impedance                                         |                | Fully charged battery (25°C) 15mΩ |
| Temperature dependency of capacity (20 hour rate) | 40°C           | 102%                              |
|                                                   | 25°C           | 100%                              |
|                                                   | 0°C            | 85%                               |
|                                                   | -15°C          | 65%                               |
| Self-discharge (25°C)                             | After 3 month  | 91%                               |
|                                                   | After 6 month  | 82%                               |
|                                                   | After 12 month | 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    | 853   | 557    | 425    | 357    | 266    | 188    | 150 | 103  | 83.1 | 61.9 | 47.5 | 39.2 | 31.5 | 21.6 | 11.7 |
| 9.9V    | 800   | 546    | 423    | 351    | 263    | 186    | 148 | 101  | 82.5 | 61.5 | 47.2 | 38.9 | 31.4 | 21.5 | 11.7 |
| 10.2V   | 750   | 532    | 414    | 345    | 260    | 185    | 146 | 99.1 | 80.3 | 60.9 | 46.9 | 38.6 | 31.2 | 21.3 | 11.6 |
| 10.5V   | 672   | 493    | 385    | 328    | 254    | 182    | 145 | 97.0 | 77.5 | 60.0 | 46.6 | 38.3 | 30.8 | 21.2 | 11.6 |
| 10.8V   | 594   | 440    | 359    | 319    | 246    | 179    | 141 | 94.3 | 73.9 | 58.8 | 46.0 | 37.4 | 30.3 | 21.0 | 11.5 |

## 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    | 85.0  | 55.3   | 40.0   | 34.2   | 24.0   | 16.9   | 12.7 | 9.04 | 6.98 | 5.17 | 3.95 | 3.26 | 2.61 | 1.75 | 1.01  |
| 9.9V    | 79.7  | 54.2   | 39.7   | 33.6   | 23.7   | 16.8   | 12.6 | 8.86 | 6.92 | 5.14 | 3.93 | 3.23 | 2.60 | 1.75 | 1.01  |
| 10.2V   | 74.7  | 52.8   | 38.9   | 33.1   | 23.5   | 16.6   | 12.4 | 8.68 | 6.74 | 5.09 | 3.90 | 3.20 | 2.58 | 1.73 | 1.00  |
| 10.5V   | 66.9  | 48.9   | 36.2   | 31.4   | 22.9   | 16.4   | 12.2 | 8.50 | 6.51 | 5.01 | 3.88 | 3.18 | 2.55 | 1.72 | 1.00  |
| 10.8V   | 59.2  | 43.6   | 33.8   | 30.6   | 22.2   | 16.1   | 12.0 | 8.27 | 6.20 | 4.91 | 3.82 | 3.10 | 2.51 | 1.70 | 0.994 |

All mentioned values are average values

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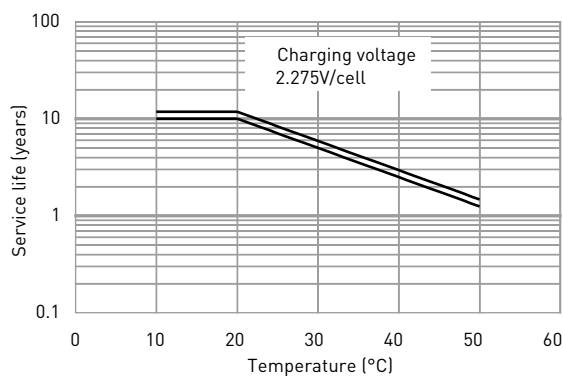
### CHARGING METHOD (25°C)

**Trickle use** Control voltage: 13.6V - 13.8V  
Initial current: 3.00A or smaller

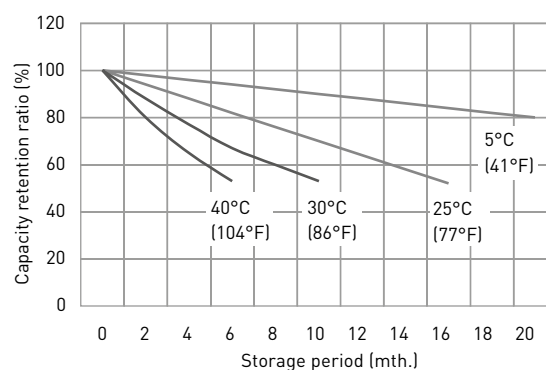
### CUT-OFF VOLTAGE

| Discharge current | 1.00A - 4.00A | 4.00A - 10.0A | 10.0A - 20.0A | 20.0A - 40.0A | 40.0A - 60.0A |
|-------------------|---------------|---------------|---------------|---------------|---------------|
| Cut-off voltage   | 10.5V         | 10.2V         | 9.9V          | 9.3V          | 8.7V          |

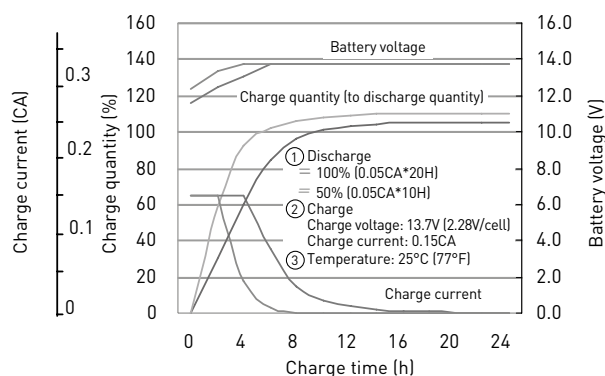
### INFLUENCE OF TEMPERATURE ON TRICKLE LIFE



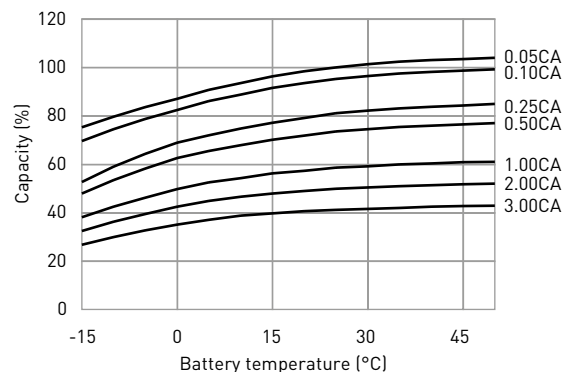
### RESIDUAL CAPACITY TEST RESULT



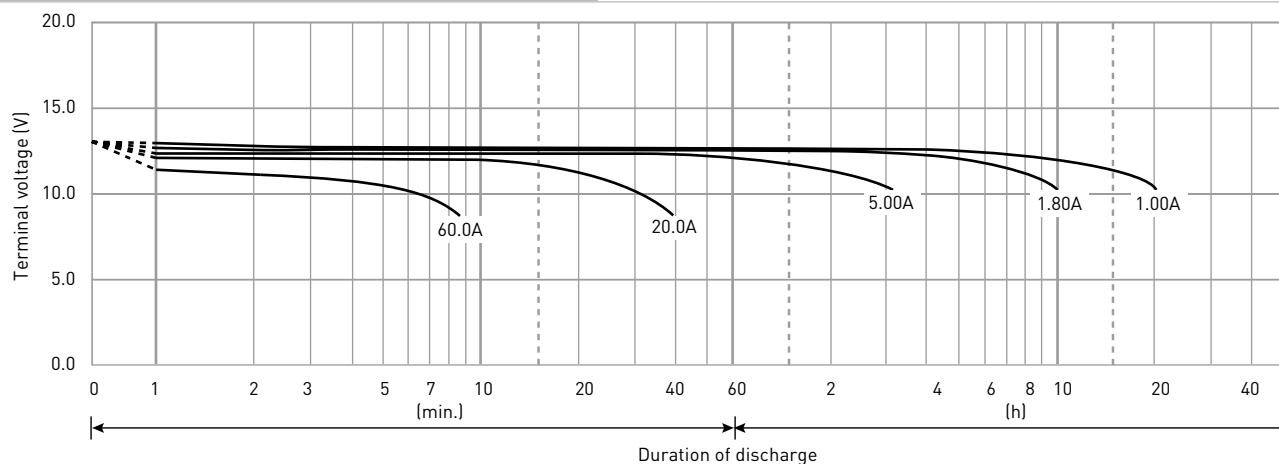
### CONSTANT-VOLTAGE CONSTANT-CURRENT CHARGE CHARACTERISTICS FOR TRICKLE USE



### DISCHARGE CAPACITY BY TEMPERATURE AND BY DISCHARGE CURRENT



### DISCHARGE CHARACTERISTICS



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