# KBL12330 12V 33Ah

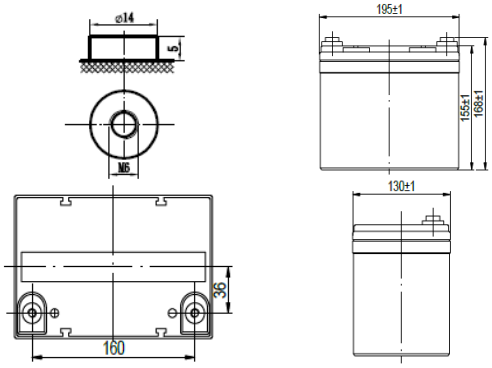
The KAISE LONG LIFE Series 10 years has been designed for different applications, such as UPS, electric and telecommunications applications that require a long useful life.




## Performance Characteristics

| | | |
|---|---|---|
| Nominal Voltage | 12V | |
| Dimensions | Length (mm / inch) | 195 / 7.68 |
| | Width (mm / inch) | 130 / 5.12 |
| | Height (mm / inch) | 155 / 6.10 |
| | Total Height (mm / inch) | 170 / 6.69 |
| Approx. Weight | (Kg / lbs) | 11.0 / 24.3 |
| Design Life | 10 years | |
| Terminal | M6 | |
| Container Material | ABS | |
| Rated Capacity | 33.2Ah / 3.32A | (10hr, 1.70V/cell, 25ºC / 77ºF) |
| | 30.75Ah / 6.15A | (5hr, 1.70V/cell, 25ºC / 77ºF) |
| | 21.2Ah / 21.2A | (1hr, 1.70V/cell, 25ºC / 77ºF) |
| Max. Discharge Current | 330A (5s) | |
| Internal Resistance | Approx 10mΩ | |
| Operating Temp. Range | Discharge : -20 ~ 60ºC (-4 ~ 140ºF) | |
| | Charge : -10 ~ 60ºC (14 ~ 140ºF) | |
| | Storage : -20 ~ 60ºC (-4 ~ 140ºF) | |
| Nominal Operating Temp. Range | 25 ± 3ºC (77 ± 5ºF) | |
| Cycle Use | Initial Charging Current less than 6.6A | |
| | Voltage: 2.35VPC ~ 2.40VPC at 25ºC (77ºF) | |
| | Temp. Coefficient: -30mV/ºC | |
| Standby Use | Initial Charging Current less than 6.6A | |
| | 2.25VPC ~ 2.30VPC at 25ºC (77ºF) | |
| | Temp. Coefficient: -20mV/ºC | |
| Capacity affected by Temperature | 40ºC (104ºF) | 103% |
| | 25ºC (77ºF) | 100% |
| | 0ºC (32ºF) | 86% |
| Self Discharge | Fully charged Kaise Long Life Series batteries may be stored for up to 6 months at 25ºC (77ºF) and then a freshening charge is required. For higher temperatures the time interval will be shorter. | |

## Dimensions and Terminal (Unit: mm (inches))




## Applications

UPS
Telecomunications equipment
Solar energy systems
Cable TV
Power station
Marine equipment
Military equipment
Emergency power systems
Railway systems

## Certifications

ISO 9001:2008 ISO 14001:2008

## Discharge Current vs. Discharge Voltage

| Final discharge voltage V/CELL | 1,8 | 1,75 | 1,7 | 1,6 |
|---|---|---|---|---|
| Discharge current (A) | I ≤ 0,1CA | 0.25CA ≥ I > 0.1CA | 0.55CA ≥ I > 0.25CA | I > 0.55CA |

## Constant Current Discharge (Amperes) at 77ºF (25ºC)

| Volts/cell | 10min | 15min | 30min | 1h | 3h | 5h | 10h |
|---|---|---|---|---|---|---|---|
| 1.80V | 60.0 | 49.5 | 31.9 | 19.8 | 8.18 | 5.50 | 3.30 |
| 1.75V | 69.0 | 52.0 | 32.8 | 20.3 | 8.25 | 5.58 | 3.31 |
| 1.70V | 73.0 | 54.5 | 33.2 | 21.2 | 8.45 | 6.15 | 3.32 |
| 1.65V | 77.3 | 59.4 | 36.3 | 21.9 | 8.97 | 6.25 | 3.35 |
| 1.60V | 80.2 | 61.5 | 37.0 | 22.3 | 9.08 | 6.30 | 3.36 |

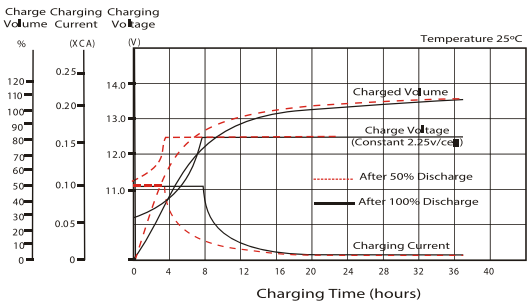
## Constant Power Discharge (Watts per cell) at 77ºF (25ºC)

| Volts/cell | 10min | 15min | 30min | 45min | 1h | 2h | 3h | 5h |
|---|---|---|---|---|---|---|---|---|
| 1.80V | 116 | 97.9 | 61.0 | 48.8 | 38.3 | 21.0 | 15.2 | 11.0 |
| 1.75V | 132 | 103 | 62.7 | 49.1 | 39.1 | 21.8 | 16.0 | 11.3 |
| 1.70V | 136 | 107 | 64.5 | 51.2 | 39.9 | 22.6 | 16.8 | 11.5 |
| 1.65V | 145 | 110 | 69.3 | 53.2 | 40.5 | 23.1 | 17.3 | 11.9 |
| 1.60V | 150 | 117 | 72.4 | 53.8 | 40.9 | 23.3 | 17.4 | 12.2 |

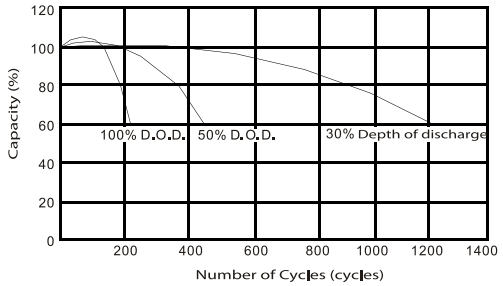
(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the mimimum values.

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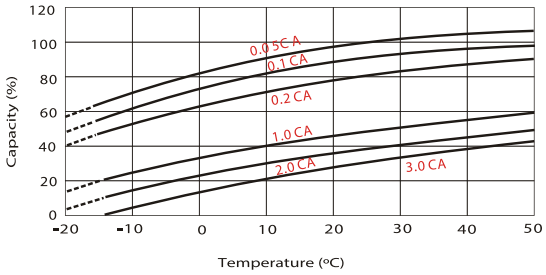
## Charging Characteristics (float use)



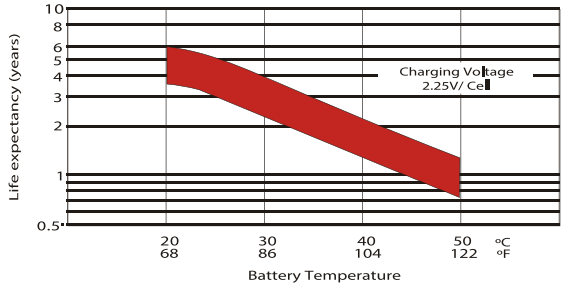

## Cycle Life in Relation to Depth of Discharge



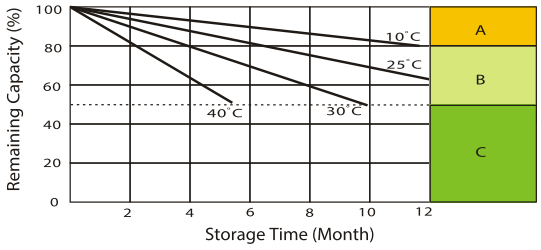

## Temperature Effects in Relation to Battery Capacity




## Effect of Temperature on Long Term Float Life




## Self Discharge Characteristics




**A** No supplementary charge required
(carrry out supplementary charge before use if 100% capacity is required)

**B** Supplementary charge required before use . Optional charging way a below:
1. Charged for above 3 days at limited current 0.25 CA and constant voltage 2.25V / cell.
2. Charged fo above 20 hours limited current 0.25CA and constant voltage 2.45V / cell.
3. Charged for 8-10 hours ar limited current 0.05 CA.

**C** Supplementary charge often fail to recover the capacity.
The battery should never be left standing till this is reached.

IMPORTANT NOTE: The specifications presented herein are subject to revision without notice.