

KBC12550 12V 55Ah



The Kaise cyclic batteries were developed for deep discharges with very heavy non-porous battery plates to withstand major discharging and charging cycles (deep cycle). These batteries use different chemistry combinations for the plates with active paste material and a slightly stronger than normal electrolyte, which allows for a much longer life in deep cycle applications.



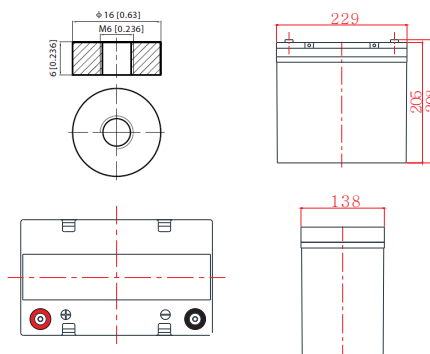
Performance Characteristics

| | | |
|----------------------------------|--|-----------------------------------|
| Nominal Voltage | 12V | |
| Dimensions | Length (mm / inch) | 229 / 9.02 |
| | Width (mm / inch) | 138 / 5.43 |
| | Height (mm / inch) | 205 / 8.07 |
| | Total Height (mm / inch) | 208 / 8.19 |
| Approx Weight | (Kg / lbs) 17.5 / 38.6 | |
| Design Life | 12 years | |
| Terminal | M6 | |
| Container Material | ABS | |
| Rated Capacity | 55.0Ah / 5.50A | (10hr, 1.80V / cell, 25°C / 77°F) |
| | 50.0Ah / 10.0A | (5hr, 1.75V / cell, 25°C / 77°F) |
| | 36.5Ah / 36.5A | (1hr, 1.70V / cell, 25°C / 77°F) |
| Max. Discharge Current | 660A (5s) | |
| Internal Resistance | Approx 8.6mΩ | |
| Operating Temp. Range | Discharge : -20 ~ 50°C (-4 ~ 122°F) | |
| | Charge : -20 ~ 50°C (-4 ~ 122°F) | |
| | Storage : -20 ~ 50°C (-4 ~ 122°F) | |
| Cycle Use | Initial Charging Current less than 13.8A | |
| | Voltage: 14.4V- 15.0V at 25°C (77°F) | |
| | Temp. Coefficient: -30mV/°C | |
| Standby Use | Initial Charging Current less than 13.8A | |
| | Voltage: 13.5V ~ 13.8V at 25°C (77°F) | |
| | Temp. Coefficient: -18mV/°C | |
| Capacity affected by Temperature | 40°C (104°F) | 103% |
| | 25°C (77°F) | 100% |
| | 0°C (32°F) | 86% |
| Self Discharge | Fully charged Kaise Deep Cycle 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. | |

Discharge Constant Current (Amperes) at 25°C (77°F)

| Volts/cell | 5min | 15min | 30min | 1h | 3h | 5h | 10h | 20h |
|------------|------|-------|-------|------|------|------|------|------|
| 1.80V | 149 | 89.1 | 58.0 | 35.1 | 14.8 | 9.76 | 5.50 | 2.94 |
| 1.75V | 166 | 95.6 | 60.6 | 36.0 | 14.9 | 10.0 | 5.56 | 2.96 |
| 1.70V | 180 | 98.8 | 61.2 | 36.5 | 15.0 | 10.1 | 5.61 | 2.97 |
| 1.65V | 188 | 101 | 62.3 | 36.8 | 15.3 | 10.2 | 5.67 | 2.99 |
| 1.60V | 194 | 104 | 63.3 | 37.0 | 15.4 | 10.3 | 5.72 | 3.00 |

Dimensions and Terminal (Unit: mm (inches))



Applications

- Solar power systems
- Electric wheel chairs
- Golf carts
- Maritime equipment
- Power plants
- Railway systems
- Telecommunications systems
- Cable TV systems
- Emergency power systems

Certifications

ISO 9001 / ISO 14001



Discharge Current vs. Discharge Voltage

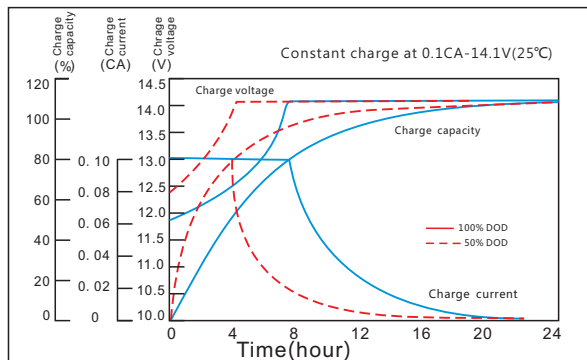
| Final discharge voltage V/CELL | 1.8 | 1.75 | 1.7 | 1.6 |
|--------------------------------|----------------|-------------------------|--------------------------|--------------|
| Discharge current (A) | $I \leq 0.1CA$ | $0.25CA \geq I > 0.1CA$ | $0.55CA \geq I > 0.25CA$ | $I > 0.55CA$ |

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

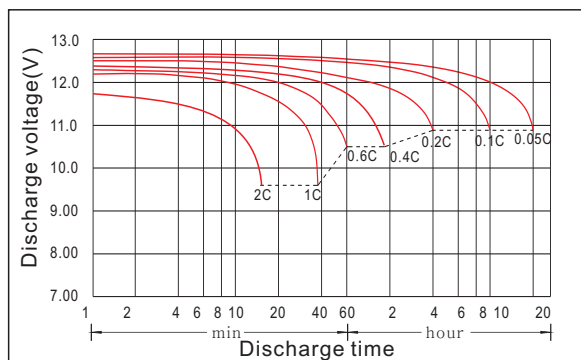
| Volts/cell | 5min | 15min | 30min | 1h | 2h | 3h | 5h |
|------------|------|-------|-------|------|------|------|------|
| 1.80V | 266 | 167 | 110 | 67.9 | 39.6 | 28.5 | 19.0 |
| 1.75V | 290 | 177 | 113 | 68.4 | 39.7 | 28.6 | 19.2 |
| 1.70V | 311 | 178 | 114 | 68.9 | 39.9 | 28.8 | 19.4 |
| 1.65V | 313 | 180 | 114 | 69.5 | 40.0 | 28.9 | 19.5 |
| 1.60V | 325 | 183 | 115 | 70.0 | 40.2 | 29.3 | 19.6 |

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

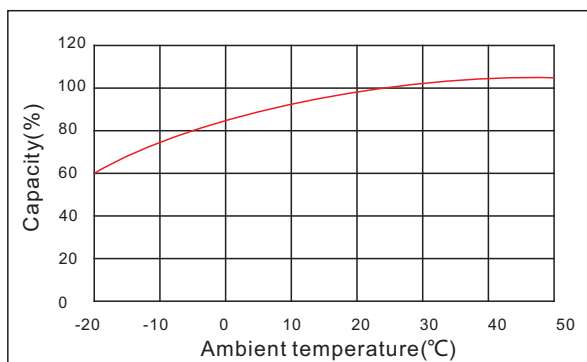
Charging Characteristics (standby use)



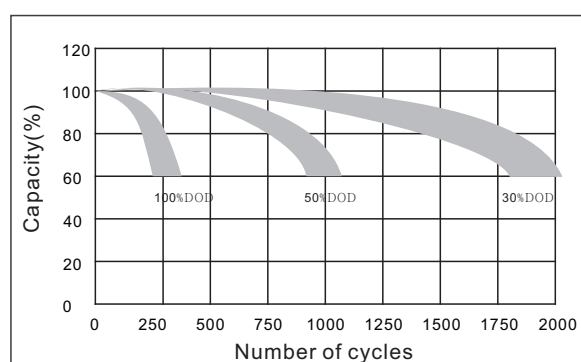
Discharge Characteristics



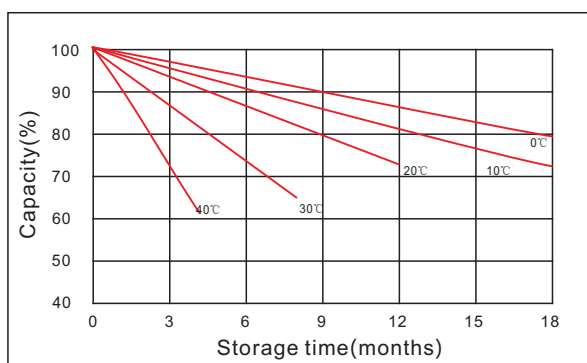
Temperature Effects in Relation to Battery Capacity



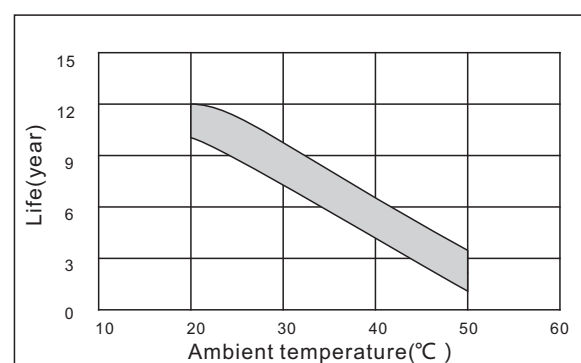
Cycle Life in Relation to Depth of Discharge



Curves of Self-Discharge



Temperature Effects on Float Life



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

